# A TWENTIETH CENTURY FUND SURVEY

THE TRUSTEES of the Fund choose subjects for Fund investigations, underwrite the expenses of each project and appoint special committees which formulate programs for action based on the findings. The Trustees, however, assume no responsibility for the findings or the recommendations for action that result.

# INTERNATIONAL CARTELS SURVEY OF THE TWENTIETH CENTURY FUND

THE FOLLOWING committee has been in charge of an extensive investigation into the problems of international cartels which has been conducted by a special research staff. The Committee is responsible for the report and recommendations for action contained in Chapter 12 of this second volume in the survey series. The Research Directors are responsible for the factual findings in Chapters 1 to 11 inclusive.

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# CARTELS OR COMPETITION?

*The Economics of International Controls by Business and Government*

*BY*

GEORGE W. STOCKING

*AND*

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*With the Report and Recommendations of the* Committee on Cartels and Monopoly

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# FOREWORD

THIS VOLUME is the second of a series of three reports growing out of a survey by the Fund on the timely subject of monopolies—both international and domestic.

The first volume, *Cartels in Action,* published in 1946, is a "case book." It reviews the development, describes the methods, and analyzes the results of international cartels in eight important fields: sugar, rubber, nitrogen, iron and steel, aluminum, magnesium, electric lamps, and chemicals.

Besides supplementing this factual background with concrete material on other industries, *Cartels or Competition?* gives the general reader an objective appraisal of the cartel movement as a whole. It includes an estimate of the extent to which cartels affect the foreign trade and domestic markets of the United States, and also an analysis of the influence of cartels on industrial stability, volume of employment, technological advance, and the growth of investment. After a review of various policies proposed for dealing with the thorny practical issues that cartels raise, the last chapter presents a constructive program of public and private action to deal with the problems of cartels.

A third volume in this series, to be focused directly on the domestic economy, will contain a survey of the concentration of industrial control and the spread of monopolistic business practices in recent years. This study is now in preparation and will be published in 1949.

Following its usual pattern, the Fund set up a special research staff for the Cartels and Monopoly survey headed by two leading authorities on the subject—George W. Stocking and Myron W. Watkins. Messrs. Stocking and Watkins are responsible for the factual findings of the survey: the entire volume of *Cartels in Action* and Chapters 1 to 11 inclusive of this volume.

The Fund also appointed a Special Committee on Cartels and Monopoly, under the Chairmanship of James M. Landis, formerly Dean of the Harvard Law School and Chairman of the Civil Aeronautics Board. The Committee was invited to explore the issues that the research findings disclose and to draw up a program of action to meet these challenging problems. In selecting the distinguished members of this Committee, listed opposite the title page, the Trustees of the Fund sought to give unofficial representation to the points of view of business, labor and agriculture, as well as to those of the economic and legal professions. Chapter 12 of this book embodies the Committee's report on cartels.

The Fund deeply appreciates the generous contribution in time and effort which the members of the Committee have made to this survey. They have rendered a public service of genuine importance. The Fund also expresses its appreciation to the research directors and the survey staff for their labors, of which this volume is the impressive result.

EVANS CLARK, *Executive Director*
*The Twentieth Century Fund*

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# PREFACE

SOME ECONOMISTS have regarded international cartels primarily as instruments for shaping commercial policy among trading nations, and they have concluded that when conceived in this way the cartel problem is not very important. Others have viewed the cartel problem as a new form of the age-old monopoly problem. To them the problem is primarily that of protecting consumers from exploitation by organized groups of producers with power to control the market. The present study adopts a broader conception of the cartel problem than either of these. It treats cartels primarily as instruments for allocating productive resources and regulating their use; and it appraises the economic significance of the cartel movement in this light.

The basic issue as we view it does not revolve around the direct effects of cartels on the terms and volume of international trade. Nor is it primarily a question of whether and how far cartel restrictions can be kept from hurting the immediate interests of consumers. At bottom, the issue is whether centrally planned and directed programs for the production and distribution of goods, industry by industry, provide a more promising method of effecting economic adjustments and promoting economic stability than that of competition in free markets. Another question is whether the two methods are mutually exclusive.

Events since the war have underlined the importance of these issues. With the defeat of the Axis countries and the founding of the United Nations, at first the way appeared open to concerted intergovernmental action to restore something like free competition in world markets and to prevent the reintroduction of cartel controls. But the steady deterioration of international relations since the coming of the peace that is no peace has changed the whole picture. Today the cartel problem from the American standpoint is mainly a

problem of how to safeguard opportunities for free, private, competitive enterprise in world markets that have come more and more under the domination of state trading monopolies.

The aggressive political and commercial policies of Soviet Russia in proselytizing the countries of eastern Europe are not alone responsible for the development of this new aspect of the cartel problem. In western Europe the spread of compulsory employment, nationalization of industry, bulk-purchasing agreements, exchange controls, rigorous rationing of both industrial materials and consumable commodities, all point toward the indigenous growth of directed economies. However reluctant the nations of western Europe may have been to accept industrial regimentation, and however temporary they may conceive the expedient, the fact is that in their extremity they have almost closed the door to free enterprise and competitive trading. They could, or at any rate thought they could, find no other way to keep alive.

The implications of these developments for the public economic policies of the United States are sobering. How can America maintain an economy based on free enterprise and competitive markets when most of the prospective customers for its exports and suppliers of its imports are state trading monopolies? This is one of the thorny issues explored in the following pages.

The manuscript of this study was completed in the late spring of 1947. Both the factual data and textual comment in many passages reflect the long time-gap between writing and publication. But because the analysis is focused primarily on principles, in the main we have let the manuscript stand.

Like its predecessor, *Cartels in Action,* this volume is a joint venture. Every chapter, indeed every page, reflects its dual authorship. Many passages, moreover, have benefited from the constructive criticism of members of the Fund's Committee. Though we have no responsibility for the Committee's recommendations, which appear as Chapter 12 of this volume, we are glad to record our general agreement with them.

Murray Grebow and Richard Greenwald, as members of the staff during part of the time this study was in preparation, ably contributed to the basic research. To attempt a complete catalogue of our

indebtedness to the many critics who have read individual chapters would risk mortifying omissions. But we cannot pass without specific acknowledgment the searching criticism of the entire manuscript by Professors George H. Hildebrand, Jr., and Alfred E. Kahn.

Finally, we wish again to express our gratitude for the generous help and friendly encouragement of Evans Clark, the Fund's Director, of J. Frederic Dewhurst, the Fund's Economist, and of the Fund's editorial staff. But final responsibility for the book, except Chapter 12, rests of course with the authors.

GEORGE W. STOCKING
MYRON W. WATKINS

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# CARTELS OR COMPETITION?

## *Chapter 1*

# THE DECLINE OF COMPETITION

TWENTY YEARS ago only the expert used the word "cartel." Today the man on the street bandies it about, perhaps with more feeling than understanding. Cartels are apt to mean all things to all men, but they do have a common significance to the ordinary citizen: they are anathema. Some businessmen and economists have even suggested that only under another name can the cartel movement be appraised with fairness. Some propose that cartel agreements be called "business accords." Though probably nothing can be gained by recourse to semantics, the necessity for a clear and unbiased definition of the term is evident.

### *Cartels Defined*

A cartel is an arrangement among, or on behalf of, producers engaged in the same line of business, with the design or effect of limiting or eliminating competition among them.[1] This study deals primarily with international cartels, the operations of which have been widely publicized since the outbreak of World War II. The members of these cartels are located in, or do business in, two or more countries.

Rival business enterprises may set up cartels by direct negotiation and mutual commitments, or governments may establish them by treaty. When most of the producers are located in one country, a single government's statute or decree may suffice. Among cartels set up by private business interests are those in aluminum, explosives, glass, and wood pulp. Among those established by treaty are the tin, rubber, tea, and sugar cartels. The Chilean nitrate, Dutch quinine, Japa-

1. The word "cartel" comes from the Latin *charta,* meaning a paper, a writing, a letter. Until modern times the term had chiefly a military application, denoting a written agreement between belligerents for the exchange of prisoners. Presumably it was this significance of a temporary truce among rivals that suggested its adaptation to trade terminology. See Murray's (Oxford) Dictionary.

nese camphor, and Danish cryolite cartels are examples of the type founded by unilateral governmental action.

The definition of a cartel adopted for the present study includes not only market-regulating schemes involving several enterprises operating as separate business units but also those based on the consolidation of producers under a common ownership. The latter kind obviates the need for continuing "agreements." Consolidation of ownership has occurred under private auspices, as in the Swedish Match Company, International Nickel Company, and Borax Consolidated, Ltd., and under government pressure or compulsion, as in Cosach (Chilean nitrates). But in only a comparatively few instances has a single group of corporate interests gained control of world markets for a particular product by merger, acquisition of competing properties, or establishment of a community of interests through financial interpenetration or interlocking directorates.[2] This is partly because of the tenacity of family or national interests in established domestic enterprises.

Usually a cartel consists of a number of separately owned concerns that retain their legal identities while associating themselves under a contract or an informal understanding for the purpose of market control. The loose cartel structure may reflect the great variety of products in an industry and the complexity of established marketing procedure, making difficult an over-all agreement among competitors with a different range, or diverse methods, of operation. Or it may reflect simply mutual trustfulness among a small number of well-entrenched business giants, each operating in a national domain recognized as its special preserve.

The legal status of cartels may vary greatly. At one extreme are cartels founded on agreements negotiated, or openly sponsored, by governments that have a vital interest in a particular industry. At the other extreme are those that business groups set up privately and secretly in disregard, if not in violation, of the law in one or more of the political jurisdictions within the scope of the agreement.

2. In the technical literature of cartels, a working control of the market acquired by merging competing properties under a single ownership or through financial interpenetration and interlocking directorates is not ordinarily termed a cartel. German usage, particularly, confines the term to arrangements among otherwise separate and independent business units designed to establish joint control over the market. As the public is chiefly interested in results, not methods, both types of arrangements are included in this study.

But whether cartels are closely or loosely knit, their scope broad or narrow, their structure formal or informal, their methods secret or open, their sponsorship private or public, their status legal or illegal, they are alike in one respect: without exception, all cartels aim to substitute concerted or unified control of the market for the hazards and insecurity of competitive enterprise. A cartel is designed to reduce rivalry among business concerns and to make them less subject to the influence of intangible market forces. Monopoly power is not an essential criterion of a cartel, however, as the term is here used. It is enough that the arrangement aims to lessen competition, as by mutually restricting the discretion of business managers over investment, output, pricing, or some other phase of business policy. Cartels represent an effort to free business operations from control by the market and, instead, to subject the market to deliberate control by, or on behalf of, the businessmen.

*Cartels the Antithesis of Competition*

Cartel schemes are as old as business. More than a century and a half ago, Adam Smith noted that businessmen rarely meet for merriment or diversion but their conversation results in a conspiracy to raise prices. Despite Smith's acute insight into business practice, he was not an exponent of regulated monopoly. Rather, *The Wealth of Nations* was a call to unshackle private enterprise and keep competitive opportunity open.

Though cartel practices are old, the cartel movement is young. It is the product of a mature, not an infant, industrial society. It represents a rejection by businessmen and statesmen, after more than a century of almost reverent acceptance, of Smith's obvious and simple system of natural liberty. Only in the light of this fact can the historical and institutional significance of the growth of cartels in recent decades be fully understood.

The forces making for economic collectivism, of which cartel arrangements are but one manifestation, have been steadily gathering strength for a half century. But for more than a hundred years after its formulation Adam Smith's economic philosophy exerted a profound influence on public opinion, on legislative policy, and on business practice. It was the theoretical foundation or rationalization on which the countries of the Western world erected both the struc-

ture of modern industry and the superstructure of modern economics.

As the Industrial Revolution gathered momentum in the early nineteenth century, economic liberalism developed apace as its theoretical counterpart. Businessmen and statesmen threw off the bonds that had previously restrained economic activity. Markets were everywhere being freed—though at different rates in different countries—from the conscious control to which mercantilistic statecraft and such guild conventions and regulations as still survived from the Middle Ages had subjected them. But chaos did not result. On the contrary, competition became the organizing principle on which a system for the control of economic life developed. Economic liberalism manifested itself in two closely related social policies, the one designed to foster internal freedom of industry, the other external freedom of trade. Both can be denoted by a single phrase: free competition.

Wherever the new industrial system took hold, the organization and control of economic activities by competitive forces became the general rule. Occidental society came to rely mainly on price movements in relatively free markets to determine not only what goods should be produced, and in what amounts, but also how the income derived from their sale should be distributed. Moreover, the influence of the free market extended far beyond the areas within which its organizing role was predominant. Price was the link between industrial Europe and America on the one hand and the so-called backward areas throughout the world, which supplied many of the raw materials essential to peoples living by machine industry.

For more than a century, free competition set the pattern of the economic order that the peoples of Western civilization were building. Though never fully practiced anywhere, it constituted the banner under which they marched forward. The remarkable gains in the relative power and well-being of the countries that had the competitive system gave support to its exponents and won it many converts. Of course, in all these countries there were exceptions to the rule of competition. But departures in social policy from this norm had to overcome strong prejudices, and disregard of it in business practice encountered vigorous opposition. The free competitive market became, by common consent, the basic institution of nineteenth-century industrial civilization.

### *Removing the Barriers to Trade*

Competition can flourish only in an atmosphere of freedom. Recognizing this, economic liberals tried to remove barriers to trade—internal and external, public and private. Even before Adam Smith's time, the opposition of a rising capitalistic class had eliminated the "monopoly system" established under the Tudors and Stuarts in England's domestic trade and industry.

Early in the nineteenth century the growing body of English liberals made an assault on the Navigation Acts, which gave preferential treatment to British shipping and which had been a continual source of irritation to American shippers both before and after the American Revolution. By the middle of the century England had repealed the Navigation Acts and negotiated treaties with all important commercial countries extending full equality and reciprocity in shipping. Parliament had also repealed the Corn Laws, under which duties on imports were adjusted in accordance with changes in the price of domestic corn (grain). The collapse of the Corn Laws, symbolic of the power of the landed interests, sounded the death knell of the whole protective tariff system in England. One by one the trade barriers were removed. Free trade triumphed. The Manchester school transformed freedom of enterprise from a system of logic into a rule of conduct.

### *The Competitive System in America*

In America competition found a friendly environment. The American Revolution was mainly a revolt against a system of mercantilism under which England had subjected colonial activities to far-reaching regulation and had subordinated colonial interests either to the broad interests of empire or to the narrow interests of a trade monopoly. The Declaration of Independence was a political counterpart to *The Wealth of Nations.* That they both appeared in 1776 is more than coincidence. They breathe the same spirit of independence and freedom. They both renounce controls administered by the state for the benefit of vested interests. They both confer on the individual a new dignity and significance. The one in matters civil and political, the other in economics, looks to the individual, not to the state, for man's salvation.

The American continent, with its ever-advancing frontier, continually created anew an environment that nurtured individual initiative, aggressiveness, and boldness. The frontier environment fostered all the values of personal freedom and social equality. America became the home of the self-made man. Whether or not the self-made man was a pecuniary organism, as Veblen characterized him, he relied largely on himself.

In America, even more than in England, a host of enterprising individuals organized and directed economic activity pursuant to their independent judgments. The mechanism of the self-adjusting market served as the principal coordinator of the varied activities of a mixed population busily settling a continent and developing its resources. On the whole, the free market did a good job.

Counterdevelopments made themselves felt, of course. Local monopolies took root here and there. Tariff walls were raised higher and higher in response to the demands of a rising industrial class. Internal improvement programs flourished under government sponsorship. The clash of sectional interests resounded in political controversy, and outbreaks of class warfare occasionally occurred. Granger laws, labor legislation, and social settlements testified to the awakening of collective concern for a common welfare that was not always well served by hardy individualists single-mindedly pursuing the main chance. Yet in spite of all this, the United States became increasingly a land of free enterprise as the century progressed. Competition was regarded as not merely "the life of trade"; it was the force on which the American Republic mainly depended for the organization and guidance of its economic life.

### *America and the World Market*

In truth, America became a part of the nineteenth-century competitive world market, the center of which was free-trade England. Under its free-trade system England became the world's workshop. Its position as such rested on a far-flung geographic division of labor. From outlying colonial regions England drew cheap food supplies with which to feed its workmen and cheap raw materials with which to feed its machines. But it was a two-way traffic.

From England's factories went finished products to consumers

throughout the world. From its banks and investment houses flowed funds to finance enterprises in less-developed regions. These loans and investments led to an expansion of British exports: iron and steel for railways and factories; hardware, cutlery, and textiles for consumers. They afforded a means by which England could support an increasingly unfavorable balance of trade. From the world's four corners, above all from America, foodstuffs and raw materials went to England. Competition became the organizing force in world markets and all nations shared in the advantages of a world-wide division of labor.

With a minimum of government interference, individuals seeking only private gain organized production and promoted trade. This self-serving enterprise system gave society a reasonable continuity of goods and services in the relative amounts and of the particular qualities demanded. To be sure, recurring periods of relative scarcity, accompanied by unemployment and suffering, followed periods of relative surplus. Local maladjustments persisted to the distress of those on whom their impact directly fell. Marked inequalities developed in the distribution of income. Great poverty grew side by side with great fortunes. But in spite of shortcomings the system worked. Population increased; production and trade expanded; standards of living improved. The material welfare of mankind advanced.

### *Favorable Conditions for Competition*

The system worked under peculiarly favorable conditions. Two factors contributed powerfully to its success. The Industrial Revolution, receiving its initial impetus in England, had given Britain a tremendous lead over other nations. To exploit this advantage fully, free trade was essential. To supply its machines, England needed cheap raw materials; to feed its workers, cheap foodstuffs. Free markets were a prerequisite to both. To use the machines economically, to secure the full advantages of specialized and large-scale production, England required large markets for manufactured products. In the language of Smith, "The division of labor is limited by the extent of the market." Markets could be made large by making them free.

Furthermore, the settlement of the American continent released forces that produced a business boom such as the world had never

seen.[3] Within a single century America's population increased twentyfold. Within the same period its frontier advanced by successive stages from the Atlantic to the Pacific. Barren spots became villages; villages became towns; towns became cities. For the movement of men and goods, waterways, highways, and steam railways successively linked these settlements and progressively made them economically interdependent. A common language, a vigorously developed postal system, and later the telegraph and the telephone, tied them together. For their material needs a succession of revolutionary technological advances provided expanding supplies of food, clothing, housing, and household conveniences. For the spiritual welfare of a growing population, churches, schools, libraries, and recreation facilities multiplied.

The transformation of America from an unsettled wilderness with a simple, rugged pioneer culture to a teeming industrial empire with a broad and expanding technological base created both a source of supply for raw materials and a market for finished goods such as had never before developed so quickly. It brought investment opportunities such as men had hitherto only dreamed of. It afforded an ideal environment for the functioning of a free competitive society. Risks were great, but the rewards were also large. In the great gamble for colossal stakes few were unwilling to take a chance.

The dynamic qualities of this economy facilitated the adjustments that competition imposes. A failure in one place was overshadowed by a success in another. Defeat today did not stifle the hope of victory tomorrow. Opportunities multiplied more rapidly than failures occurred. Men seized these opportunities with avidity and many grew rich by their daring. The nineteenth century earned its appellation—"the age of enterprise."

### *Realities vs. Ideals*

Although the forces of economic liberalism temporarily triumphed, their victory was short-lived. Counterforces were at work in both thought and practice. By the beginning of the twentieth century economists were questioning the assumptions on which the logic of

3. This is not an exaggeration, even though the economic resurgence of Europe which accompanied the Renaissance and received a powerful stimulus from the inflow of accumulated treasure from the New World was hardly less spectacular in its own setting.

competition rested and humanitarians were questioning its end-product. The squalor and distress in the cities to which immigrants had flocked in search of better economic opportunities particularly disturbed them. They came to doubt the efficacy of the self-adjusting process that left large groups floundering in poverty while a fortunate few acquired great wealth. Jane Addams, Jacob Riis, Karl Marx, Henry George, Bernard Shaw, John Ruskin, and many others gave this viewpoint eloquent expression.

Both the economists and the humanitarians recognized a sharp cleavage between economic reality and the competitive ideal. The competitive ideal assumes a market of many sellers and many buyers. Modern technology was demanding larger and larger production units. Moreover, commercial strategy and financial considerations frequently prompted the formation of larger business units than manufacturing efficiency required. Extremely liberal corporation laws fostered this tendency. The increase in the size of corporate units of business was perhaps even more significant than the growth in the scale of manufacturing operations. In any event, together these developments reduced the number of sellers in many markets to a point where reasonably free competition became impossible.

Perfect competition is dependent on ease of entrance to productive enterprise. As the nineteenth century advanced, the character of the productive process so changed as drastically to reduce the proportion of the population that could by any possibility become independent manufacturers. In many fields the magnitude of the capital required and the forbidding intricacy of the productive process made entry difficult. Plants large enough for efficient operation often required more funds than individuals could raise. As physics and chemistry became the handmaids of industry they greatly enhanced productive efficiency, but their mysteries closed the door of business opportunities both to the untutored mind and to the small purse. The research laboratory, with its painstaking and prolonged investigations, became a necessary adjunct of industry. More and more, productive operations became dependent on accurate control of temperatures, pressures, speeds, or chemical reactions. The increasing complexity of industrial processes constituted increasingly serious obstacles to freedom of entry. Patent privileges and the careful guarding of techniques magnified these difficulties.

*Growing Limitation of Competitive Markets*

The self-adjusting competitive market requires highly flexible factors of production. But mass production calls for highly specialized plants. As a rule manufacturing facilities are durable, and frequently they are adapted to but a single use. The structure of industry became increasingly rigid. Fixed charges became a greater proportion of total costs. A lack of balance between productive capacity and demand at remunerative prices frequently developed. In periods of slack demand prices in many lines fell below total unit costs. Producers increased their output in an effort to cut unit costs; as competing producers followed their example "overproduction" resulted. In these circumstances, prices often declined faster and further than costs. Business competition tended to become "ruinous."

Certainly adjustments through the competitive process became more and more costly. The withdrawal of a firm from a declining industry brought great loss to investors and workers in the enterprise and, temporarily at any rate, to the community at large. With corporate stockholders and employees of single enterprises running into the thousands, with life insurance companies holding large blocks of corporate securities, with the welfare of entire communities and even states dependent on the prosperity of particular industries, the cost of competitive readjustments often became greater than the individuals affected were willing to bear. They were greater, also, than organized and articulate groups were willing to tolerate.

Moreover, the burdens of retrenchment in any given industry were concrete, localized, and heavy, while the benefits of competition, such as lower prices, were diffuse, slight in each transaction, and sometimes theoretical. The gain to any single individual, or even locality, was often small. The hardships of competitive readjustment frequently seemed to fall as a ton of misery on relatively few, while its benefits were spread as an ounce of blessing on the multitude.

Meanwhile, technological developments made it more difficult to relate prices accurately to costs of production, and this tended to make competitive pricing less effective. Mass production, with its large requirement of fixed capital, tremendously increased the importance of so-called overhead or fixed expenses in relation to variable expenses and made it impossible to calculate the precise produc-

tion cost of any single unit. This difficulty was often aggravated by the production of numerous byproducts or joint products from a single raw material. Price making became more and more a matter of administrative decision and less and less the unpremeditated outcome of the automatic forces of the market.

Eventually the expansive nineteenth-century environment, so favorable to freedom of trade and the operation of self-adjusting markets, passed into limbo. The American frontier had disappeared; the continent was settled. Investment opportunities, if not fewer, appeared to be less promising. As industry gradually exhausted the richer and more accessible natural resources, investment was in general forced into less profitable channels. This tendency was partly offset by technological advances, but these were sporadic and patent restrictions often impeded their potential effects in expanding investment. Furthermore, as the rate of population increase diminished, the rate of market expansion also declined. Thereafter it was not so easy to correct overexpansion of productive facilities in a particular industry by the simple process of sitting tight and waiting for the market to catch up.

### *Controls to the Rescue*

The situation paved the way for the development of jointly administered market control schemes. It also afforded a unique opportunity for the professional promoter and the investment banker. The promoter was primarily interested in profits from the sale of securities. His fee usually consisted of a substantial block of the common stock of the consolidation. He was in a better position than anyone else to know the extent to which the stock was watered, and was ordinarily anxious to convert his stock into cash at the earliest favorable opportunity. This was not difficult to manage. People commonly believed that a consolidation embracing all or a substantial part of the business concerns operating in a particular industry promised monopoly profits and, in some instances, a reduction in costs. By carefully cultivating this belief the promoter encouraged speculation in securities and created an opportunity to enrich himself, even though investors generally might not fare so well.

The investment banker played a somewhat different role. His business, like that of the promoter, was to sell securities, but unlike the

promoter, his was a continuing business based on confidence. The investment banker was interested in protecting the values of securities already sold, as well as in selling new ones.[4] He could protect security values by freeing them from the risks and losses to which they were subjected in competitive markets. As the prospects of spectacular returns from direct investment in new enterprises became less promising, as the rate of business expansion declined, as productive processes became more efficient, as competitive readjustments became more costly, the investment banker assumed the role of the *great stabilizer*. By subjecting markets to a businesslike control he could kill two birds with one stone: he could considerably lessen the risks inherent in competitive undertakings and at the same time give existing investments a monopoly value. Industrial consolidation paved the way to financial security. The investment banker was the engineer who surveyed the route.

### *Birth and Growth of Trusts*

In America these developments gave rise to a consolidation movement of such size and scope as to define an era. It began in this country around 1880 with the organization of the Standard Oil Trust, which unified control of more than 90 per cent of the oil-refining industry.[5] Though five other industries, of which sugar refining was the most important, were reorganized on the Standard Oil model during the 1880's, the use of the trustee device for this purpose was outlawed in the courts and after 1890 no new "trusts"—in the technical sense of the term—were organized.[6]

4. The promoter was more apt to follow the Barnum adage: "There's one born every minute."

5. The ordinary trust agreement is a device for separating the three principal elements of ownership: title, management, and usufruct. These are assigned to three separate parties: the one who creates the trust and retains legal title to the assets (in legal terminology the *cestui qui trust*); the trustee, who acquires equitable title and administers the property; and the beneficiary, who obtains the *income*. Under the industrial trust agreement, as exemplified by the Standard Oil Trust, the same persons were at once *cestuis qui trust*, trustees, and beneficiaries. However, to simplify management some of the businessmen who transferred equitable title to their plants to the board of trustees might accept trust certificates, giving them a share in the profits from operating all plants as a unit, without insisting on membership on the board of trustees. Thus in the second Standard Oil Trust only nine of the score or more of firms which joined the trust were represented on the board of trustees.

6. See Henry R. Seager and Charles A. Gulick, *Trust and Corporation Problems*, Harper, New York, 1929, Chap. 2; Myron W. Watkins, *Industrial Combinations and Public Policy*, Houghton Mifflin, Boston, 1927, Chap. 11; *Mergers and the Law*, National Industrial Conference Board, New York, 1929, Chap. 1; and the article on "Trusts" in the *Encyclopaedia of the Social Sciences*, Macmillan, New York, 1934.

The formation of trusts in the economic sense of the term—an industrial consolidation embracing a preponderant part of the productive capacity in a given branch of industry—continued through the adaptation of another legal device, the holding company. Before 1888, with the exception of a few companies expressly so authorized by special charters, a corporation was ineligible to hold the stock of another corporation. Partly to increase state revenues from incorporation fees and franchise taxes, New Jersey led the way in that year to a liberalization of corporation law by blanket authorization of intercorporate stockholding. A number of other states soon followed suit, and with the door thus opened to corporate consolidation, big business naturally walked in. Indeed, though industrialists showed some hesitancy at the outset,[7] they stampeded for this entrance to bigger and better combinations after a Supreme Court decision in 1895 clarified the scope and meaning of the federal antitrust law.[8]

By 1905, fifteen years after Congress passed the Sherman Act to prevent just such a development, this mass consolidation movement had left hardly a sector of American industry untouched.[9] It extended from railroads and telephones to condensed milk, matches, and buttons. In addition to outright mergers and holding companies, the means employed to eliminate competition included more devious and tenuous devices, such as patent-licensing agreements,

7. The slowness of the early development of corporate combinations after legislation opened the way was partly due to business depression in the first half of the nineties. But before 1891 several large consolidations took place, including American Sugar Refining, Diamond Match, American Tobacco, United States Rubber, General Electric, and United States Leather.

8. The Court ruled in *U.S.* v. *E. C. Knight Co.*, 156 U.S. 1 (1895), that the Sherman Act was inapplicable to a merger of manufacturing plants, even though the products of such plants moved largely in interstate commerce and even though the consolidation (American Sugar Refining Company) had obtained control of over 98 per cent of the sugar-refining capacity of the country.

9. Moody, the chief contemporary chronicler of the so-called trust movement, listed 318 industrial combinations of national or regional scope organized before 1904. Their combined capitalization exceeded $7.2 billion. John Moody, *Truth About the Trusts*, Moody Publishing Company, New York, 1904, pp. 453-67.

Few of these achieved nation-wide monopoly, however, and many went into receivership and were reorganized before World War I. Moreover, the emergence of new firms using improved techniques or more effective marketing methods which the large, unwieldy consolidations could not match often weakened such market control as was achieved. From the standpoint of technical efficiency and commercial ingenuity, it appears that in general the industrial combinations fell far short of realizing the promises of their promoters. By and large, they barely managed to hold their own. See A. S. Dewing, "Statistical Test of the Success of Consolidations," *Quarterly Journal of Economics*, pp. 84-101 (1921), and *Mergers in Industry*, National Industrial Conference Board, New York, 1929, Chaps. 3, 4, 5, especially p. 41.

interlocking directorates, and joint sales agencies. By a variety of methods, the movement toward concentration of control drastically reduced the number of independent sellers in many lines of industry and brought about a sweeping change in the structure of the national economy.

However, the bustle of amalgamation came to an end about 1904 with the onset of a mild business depression, the launching of a vigorous trust-busting campaign in Theodore Roosevelt's administration, and a radical change in the judicial construction of the antitrust law in the famous Northern Securities case.[10] The merger movement was not renewed on a large scale until two decades later.[11]

*The "New Competition"*

The forces making for collective control of markets were not spent. They remained dormant for a few years during the era of aggressive trust busting but about 1910 the movement revived and took a new turn. The trade association developed as a supplement and reinforcement of industrial consolidation. Loose association of enterprises in the same industry was not a new business phenomenon, but in the second decade of this century this form of organization acquired a new significance. Business executives began to talk about the rights and duties of self-government in industry.

In trade after trade, old associations revamped their bylaws, or new associations were formed, to implement programs of "enlightened competition," "cooperative competition," or "open competition." [12] The avowed basic premise was that only intelligent competition is salutary competition. From this premise the exponents of the

10. *Northern Securities Co.* v. *U.S.*, 193 U.S. 197 (1904). In this case the Supreme Court ruled that a holding company organized by J. P. Morgan & Company which obtained control of the Northern Pacific, the Great Northern, and the Burlington railroads was an illegal combination in restraint of trade.

11. In the twenties the climate of opinion had become favorable once more to the onward march of big business. The combination of a business boom characterized by headlong speculation, the friendly attitude of the Coolidge administration toward industrial concentration, and the emasculating construction of the antitrust law by the Supreme Court in the United States Steel case [*U.S.* v. *United States Steel Corp.*, 251 U.S. 417 (1920)] practically duplicated the situation at the turn of the century under the McKinley administration.

12. These and other terms used by various sponsors of the movement indicate the general aim to get away from, or to sublimate, the ordinary process of market rivalry among sellers. See M. N. Nelson, *Open Price Associations*, University of Illinois Press, Urbana, 1922; and *Trade Associations: Their Economic Significance and Legal Status*, National Industrial Conference Board, New York, 1925, Chap. 1 and App. A.

new competition deduced that every businessman must have full knowledge not only of his own costs, stocks, sales, and selling terms, but also of those of his business rivals. Although previously businessmen had generally treated data of this kind as secrets to be closely guarded, thousands of them in hundreds of industries, under the spell of the new gospel of trade cooperation, joined the appropriate association to exchange such data. These associations confined their membership to sellers of the same kind of products. Only one side of the market, it appeared, required "enlightenment."

An evangelical spirit had much to do with the rise of this "new competition." [13] Such slogans as "competition is war and war is hell" struck a responsive chord in harassed businessmen. Edifying codes of business ethics quieted any misgivings or compunctions which some stragglers might have felt over unfaithfulness to the old deities of business independence and forthright self-advancement. Though these codes usually invoked the Golden Rule, their main objective was abatement of price cutting.

In many cases trade associations did help rid trade of unethical practices and provide a better factual groundwork for shaping business policies. At the same time, the general thrust of the trade association movement was toward the elimination, rather than the elevation, of competition. Association executives encouraged members to interpret trade statistics uniformly and to act on them accordingly. The trade association developed into a mechanism for stabilizing market situations uncontrolled by outright consolidation.

The decline of competition marked a sharp break with the theory and practice of economic individualism. In important sections of the American economy the organization and control of industry became a joint responsibility of groups of businessmen with vested interests to protect. Businessmen increasingly relied on collective action for gaining profits. The public became more and more resigned to this method of steering the economy.

### *Combination Invades the British Stronghold*

These developments were not peculiar to America. England's early enthusiasm for Adam Smith's obvious and simple system was largely

13. See, for example, A. J. Eddy, *The New Competition*, Appleton, New York, 1911.

due to peculiar historical circumstances. Chief among these was the lead which England had taken in the Industrial Revolution. For a hundred years following Watt's invention of the steam engine England's supremacy in manufacture and commerce was uncontested. By the close of the nineteenth century, however, this situation had markedly changed. The industrialization of the United States and Germany seriously challenged British industrial leadership.

The intense commercial rivalry among the three countries is reflected in their export trade during the years immediately preceding World War I. The absolute volume of the increase in total exports for each of these countries was about the same, but the *rate* of increase was much greater for Germany and the United States.[14] Moreover, in the export of certain basic industrial products Britain had definitely yielded first place to one or the other of her commercial rivals. In 1880 British exports of iron and steel substantially exceeded those of the United States and Germany combined; in 1900 they were only slightly greater; by 1913 German iron and steel exports alone surpassed those of Great Britain.

The changes in the relative positions of the three leading industrial countries are more clearly reflected in the expansion of output in certain basic lines. For example, during 1885–1889 Great Britain's average annual output of pig iron exceeded that of the United States by about 25 per cent and was more than double that of Germany. During the next five-year period American output surpassed that of Great Britain and a decade later Germany's also forged ahead. By this time American output was more than double the British. The figures for steel show a similar trend. By 1914 the mill consumption of cotton in the United States was about a third greater than that of Great Britain; and Germany, although still considerably behind, was gaining rapidly.

As national rivalry for international trade sharpened, the advantages of collective action among businessmen in the leading industrial countries became correspondingly more apparent. Business collectivism, which had already made such serious inroads on the American and German economies, got under way in Britain, the original stronghold of free trade and economic individualism. No

14. See G. D. H. Cole, *British Trade and Industry*, Macmillan, London, 1932, pp. 106-07.

doubt its tardy development there was partly due to the absence of a protective tariff wall, which made it difficult for domestic concerns to obtain much advantage from concerted action among themselves alone. Although the trend toward concentration of industrial control was less marked in Great Britain than in the United States or Germany, by the turn of the century it had gained such headway that the United States Industrial Commission reported: "For several years past the trend of business toward consolidation and combinations of different establishments has been noticeable in England. For the last two or three years this movement has been very marked." [15]

Twenty years later, at the close of World War I, the Standing Committee on Trusts of the British Ministry of Reconstruction reported that "there is at the present time in every important branch of industry in the United Kingdom an increasing tendency to the formation of Trade Associations and Combinations, having for their purpose the restriction of competition and the control of prices." [16] The Committee predicted that monopolies "may within no distant period exercise a paramount control over all important branches of the British trade." [17] A minority of the Committee described, in even more unequivocal terms, the inroads that combinations had made on the competitive system. It boldly declared that "Free Competition no longer governs the business world" [18] and that "capitalist combination, in one or other form, and at one or other stage of production, transportation and distribution, now loads in varying degrees the price of practically everything that we purchase."

### *Political Roots of Cartels in Germany*

By World War I economic liberalism was everywhere in retreat. Moreover, industrial countries that had never subscribed wholeheartedly to it were exerting an increasing influence on international economic policy and business practices. Chief among these was Germany. That economic liberalism as a philosophy and free competition as a business practice never gained a sure foothold in Germany is to be explained primarily in terms of Germany's historical develop-

15. *Report on Industrial Combinations in Europe,* U.S. Industrial Commission, Washington, 1901, Vol. XVIII, p. 14.
16. *Report of the Committee on Trusts,* Ministry of Reconstruction (Great Britain), Cmd. 9236 (1919), p. 2.
17. *Ibid.,* p. 11.
18. *Ibid.,* p. 13.

ment. Until the second half of the nineteenth century Germany remained politically and economically retarded. The lateness of the German nation's unification reflects its political immaturity. The making of modern Germany was a nineteenth-century political venture.

Starting with a miscellaneous collection of feudalistic principalities and taking Prussia as their model, Germany's political craftsmen, of whom Bismarck was the chief, undertook to create a Great Power that would rival—or outrival—all the others. They were concerned with governmental power, national prestige, dynastic aggrandizement, military glory—in short, with all those trappings in which political absolutism is cloaked. At the same time, they recognized that powerful modern states must have a strong economic foundation. The state, under their leadership, assumed a pre-eminent role in the guidance of economic activity.

In building modern Germany they adapted to their more aggressive political program, and to the less inhibited ambitions of the imperialistic state, the habits of thought and modes of action earlier political craftsmen had used in other European countries for the same end. They relied on mercantilism both as a political philosophy and as an art of government to mold sprawling groups of feudal principalities into a cohesive political unit. Gustav Schmoller has aptly characterized mercantilism as the economic aspect of state making; conversely, Prussianism might be characterized as the political aspect of mercantilism. The unification of Germany was accomplished, in effect, by the adaptation of mercantilistic means to imperialistic ends.

The making of modern nations out of the hundreds of smaller political subdivisions into which western Europe was divided during the Middle Ages—principalities, duchies, kingdoms, and the like—involved, on its economic side, the transfer of control of trade and industry from the smaller subdivisions to the newly created larger political units. This broadened the areas within which economic activities might be carried on free from frontier obstructions. At the same time, however, the larger political unit—the state—deliberately shouldered responsibility for the economic well-being of the nation, and above all for the advancement of the interests of the mercantile classes.

The welfare of the people at large was presumed to depend on the prosperity of the merchant capitalists, which in turn was supposed to depend on the wealth and power of the state. In the making of modern Germany, however, political unification (perhaps because it came late and was correspondingly difficult) quite overshadowed the upbuilding of the power of the German business community. Business interests were deliberately subordinated to the creation of a well-knit imperial state and used to magnify its authority at home and its power abroad.

*Economic Integration of the German States*

The first step in this process—the establishment, in 1834, of a customs union of German states within which trade could be freely conducted—was taken long before the adoption of the imperial constitution in 1871. In 1834 Friederich List, arch exponent of economic nationalism, had drawn a plan for a nation-wide railway network, designed not merely to link the various lesser Germanies physically, but to make possible a fuller realization of the economic potentialities of the enlarged free-trade area. At the same time it was to establish an enduring base for Germany's industrialization and a solid foundation for her political expansion.

Writing in 1841, List characterized the customs union and the railroad system as "Siamese twins." He said:

> They were born at the same time, have grown bodily together, of a single spirit and understanding they mutually support each other and strive after one and the same great objective—towards unification of the German peoples in a great, cultivated, rich, mighty and unassailable nation. Without the Zollverein a German railway system is only a figure of speech, impossible of realization. Only with the aid of a German railroad system is it possible for the social economy of the German nation to reach true national greatness, and only following this advance can the railroad system achieve its full significance.[19]

The ideas sown by List bore fruit under Bismarck. From its birth, modern Germany relied for its economic advancement largely on centralized direction and authoritarian discipline.

19. Friederich List, *Das deutsche Eisenbahnsystem (III) als Mittel zu Vollkommung der deutschen Industrie, des deutschen Zollvereins, und des deutschen Nationalverbandes,* Werke, Band III, p. 347. (Quoted from Robert A. Brady, "The Impact of Imperial Germany," *Journal of Economic History,* December 1943, Supplement, pp. 109-10.)

## *Collectivist vs. Liberal Ideas*

The neomercantilistic policy, so powerful a factor in German unification, was indigenous; but the industrial revolution which made Germany modern was imported. Germany borrowed the machine technology largely from England.[20] Technology has therefore affected the workaday ideas and attitudes of the German people less profoundly than would otherwise have been true. As Veblen put it:

> Germany combines the results of English experience in the development of modern technology with a state of the other arts of life more nearly equivalent to what prevailed in England before the modern industrial regime came on, so that the German people have been enabled to take up the technological heritage of the English without having paid for it in the habits of thought, the use and wont, induced in the English community by the experience involved in achieving it. Modern technology has come to the Germans ready-made, without the cultural consequences which its gradual development and continued use has entailed among the people whose experience initiated it and determined the course of its development.[21]

The outstanding cultural consequence to the people of Britain of a long exposure to the Industrial Revolution was a strong bias in favor of economic liberalism. But when the Germans embraced modern technology, well-regimented collective action for the advancement of the economic interests of the nation-state was in Germany the accredited mode of behavior, an accepted institution. The uncoordinated pursuit of wealth, or welfare, by individual citizens, each according to his lights, was considered incompatible with the power and glory of the state. And the state was the apotheosis of the community.

The totalitarian state, sovereign not alone in civil jurisdiction but also in economic affairs, evolved quite naturally in Germany. It had a direct and intimate historical kinship to the habits of thought and the patterns of policy which were associated everywhere with the process of building the nation-state.

Elsewhere, however, and particularly in England, this order of ideas had gradually given way, under the impact of industrial and political revolution, to individual ways of thinking and acting. The

20. Cf. Thorstein Veblen, *Imperial Germany and the Industrial Revolution*, B. W. Huebsch, New York, 1915.
21. *Ibid.*, p. 86.

restrictions of mercantilism were not favorable to experimentation and the spirit of inquiry and innovation which the introduction of a new technology and the evolution of a democratic policy demanded.[22] As an articulate business class found the restrictions irksome, they gradually disappeared in the English setting. In their stead developed a new pattern of behavior better adapted to a rising industrialism and an emerging democracy. It favored experimentation, negotiation, spontaneous adjustment; it was founded on individual responsibility and allowed the state only an instrumental role.

### *The Cartel Is Born*

The birthplace of the modern cartel was Germany. Its emergence there had a direct connection with German neomercantilism. The earliest cartels of which we have any historical record were domestic, sponsored by the state primarily for revenue.[23] They first appeared in those industries in which the state was an active participant as a producer, but in which private enterprise had a foothold. Where competition with private business threatened the income of the state treasury, relief was sought by the organization of a cartel. This tendency was most clearly exemplified in the field of mining.

In the separate states comprising modern Germany, government ownership of subsurface minerals was the rule.[24] The development of their mining properties by the several German states followed no consistent plan. At one time or another each of the several states directly engaged in mining ventures. Occasionally, one or another adopted the principle and policy of *Bergbaufreiheit* (freedom in mining).[25] But in the latter half of the eighteenth century, as the

22. Such controls may not hamper the piecemeal, everyday process of improvement of the technical arts, as the subsequent achievements of industrial research in Germany testify. But wholesale technological pioneering is another matter.

23. Cooperation, and even formal organization, among independent producers or traders antedated the modern cartel movement by several centuries of course. Just as is true of trade unions, the roots of business association with some monopolistic features can be traced back to medieval times, or for that matter to biblical times. But the whole social and political environment of economic activity differed so radically in past ages from that since the seventeenth century that the projection of the term "cartel" to cover the earlier forms of industrial or commercial coalitions is of dubious advantage. See Roman Piotrowski, *Cartels and Trusts*, G. Allen & Unwin, London, 1933, pp. 11-86. Cf. Jacob Strieder, *Studien zur Geschichte kapitalistischer Organisationsformen*, Duncker & Humblot, Munich, 1925, Vol. I, pp. 168 ff.

24. The single exception was Hanover, which had formed a union with England (1701–1866) and so had come somewhat under the influence of British institutions.

25. Cf. George W. Stocking, *The Potash Industry*, Richard Smith, New York, 1931, pp. 46-55.

fiscal needs of the states became more pressing, the importance of mineral resources as a direct source of revenue also increased. At the same time these resources acquired a new significance technologically, especially coal, which was used both in metallurgy and for power.

The result was the adoption, under Prussian leadership, of the *Direktionsprinzip,* or control policy, for mining operations. Implementing this policy, Frederick the Great promulgated, between 1766 and 1772, a series of measures bringing all branches of the mining industry under the most rigorous state control.

It was in this setting that machine technology came to Germany. Germany embraced it eagerly, and its effect on her economic stature and industrial structure was profound. But the results were achieved within the spiritual milieu of ingrained neomercantilistic principles.

At first it looked as if Germany might adopt, with machine technology, the new economic policy that had grown up alongside it in England. In 1865 Prussia took the lead in modifying her mining laws to throw subsurface minerals open to private exploitation.[26] Other German states followed the same course. Private capital quickly responded. But as it flowed into this uncommonly speculative field of enterprise, long-established works operated by the state faced competition. It was in this situation that German cartels originated.

Competition is a mechanism for making readjustments in the use of resources, shifting them from points of relative surplus to points of relative scarcity. These readjustments are seldom painless. Where the government is not an active participant in economic ventures, however, producers may regard the pains of competitive readjustment as tolerable or at any rate inescapable. A different situation prevailed in Germany. As part of its mercantilistic policy, the state was itself engaged in producing goods. Under the new dispensation of free enterprise, it became one producer among many. But the outlook of the state was, by tradition, authoritarian and paternalistic. If competition as an agency for the regulation of economic activity threatened state revenues, competition itself must be subjected

26. A bill, introduced in the Prussian Parliament in that year, provided that certain minerals "are hereby designated . . . as available for free trade, that they may thereby form the basis of a magnificent industrial production founded upon the economic power of the people." Quoted in *ibid.,* p. 53.

to control. Such was the reaction of the German state and the obedient German people.

*Examples of Early German Cartels*

The cartel provided a convenient mechanism for the restoration of security. The two government-owned alum works of East Prussia used the device as early as 1836 when they joined with two private works to form the so-called Alaunsyndikat, or alum cartel.[27] Again, when the several state salt monopolies were dissolved in the latter half of the sixties and competition threatened to reduce revenues from the state-operated mines, these mines cooperated in establishing a series of cartels in those political divisions of the country in which the mines were located.[28]

The potash industry offers the best single illustration of the relation of the German state to the cartel movement. Prussia developed the first commercial potash mine in Germany. In 1861 it began operating its Stassfurt mines to supply potassium chloride to a refinery built by private capital for this purpose. In the same year the Duchy of Anhalt completed a shaft for the mining of potash. Soon afterward the Prussian and Anhalt governments agreed to fix the price at which each would sell potash. By 1877 two private mines had come into operation and the price-fixing agreement between Prussia and Anhalt broke down. With state revenues threatened, Prussia took the lead in the formation of the first potash cartel embracing private producers.[29] The arrangement provided for limitation of output, fixing of prices, and allocation of the market among the four producers.

From then until the compulsory cartelization of the industry by imperial legislation in 1910 the number and capacity of mines and

27. Ewald Moll, "Die preussische Alaunhüttenindustrie und die Alaunsyndikat," *Schmoller's Jahrbuch,* 1905, pp. 183-235. Under this arrangement, the Royal Institute of Maritime Trade, a government-owned banking and trading company, acted as a selling agency for the four alum works. The cartel agreement gave the selling agency immediate authority to adjust alum prices in response to changing market conditions. Final authority over prices rested, however, with the Prussian Minister of Finance. This arrangement lasted for about a decade.

28. Adolf Wurst, "Die Kartelle der deutschen Salinen," *Schriften des Vereins für Sozialpolitik,* 1894, pp. 129-64. The Norddeutsche Salinevereinigung (North German Salt Union) united under joint control of West Prussia and Lippe all the salt works, public and private, of these two states. Similarly, the Association of Rhine Provinces Salt Works united the salt works of Hesse, Baden, Württemberg, and Bavaria. These were among the earliest international cartels of record.

29. Stocking, *op. cit.,* Chap. 2, *passim.*

refineries expanded rapidly. The cartel did not purposely stimulate this growth; it was, on the contrary, an inadvertent result of cartel operations. The steady enlargement of capacity by the entrance of newcomers caused recurrent breakdowns and reorganizations of the pool. In effect, the law of 1910 made membership in the cartel compulsory, placed authority for determination of prices in the Federal Council, and provided for the allocation of markets, domestic and foreign, by a bureau consisting of three representatives of the government and four representatives of the mining companies.

### *Factors That Favored German Cartels*

Industry at large quickly followed the pattern thus drawn by the various German states. The state's example in the mining industries cannot alone explain the development of concerted control of the market by private producers in those branches of German industry in which state influence was less marked. The same factors that contributed to the decline of competition in other industrial countries were potent in Germany from the beginning of its industrialization. But there they operated in an environment which greatly intensified their influence.

In the first place, when Germany borrowed the machine technique from England it got a ready-made technology, which the British were already applying in integrated units operating by continuous processes in mass production. This made for an unusually abrupt transition in Germany from small-scale handicraft production to large-scale mechanical industry.[30] The change took place within the thirty years from the introduction of the Bessemer process in the sixties to the development of high-speed steel. The progress of the heavy-chemical industries and the establishment of the electric-power industry in these same decades greatly helped it. In the language of Brady:

> The first meant industrial application of chemical analysis and synthesis in mass output. The second the synchronization of factory operations along serial and flow lines that opened the way in the heavy industries for the giant

30. This rapid transformation from an economy of individually owned shops catering to local markets to one of corporation-financed factories selling in national and international markets contrasts sharply with the century-long industrial revolution which England went through to reach the same stage.

plant, combining several operations, which became so common a feature of German industrial development by the turn of the century.[31]

Moreover, modern Germany represented a highly compact, well-integrated, and efficient industrial machine, but it lacked a free-trade hinterland large enough to absorb the tremendous volume of goods and services that the machine could turn out. The German political and economic craftsmen had not designed the machine solely for the creation of private income and the upbuilding of the domestic economy. Their primary object was the aggrandizement of the German state. This made it necessary to tie outlying territories in with the German national economy. For German leaders had developed the basic industries to standards and capacities which had only the most tenuous relation to peacetime markets available inside Germany. So they erected tariff barriers to prevent the competition of outsiders in the limited domestic markets, and developed cartels to exploit this market most profitably.

Cartels could also protect and promote the interests of German industries in their foreign operations. Some of Germany's close neighbors, notably France and Belgium, had also developed their principal industries with an eye to foreign as well as domestic markets. To hold these rivals in check and to insure profitable exploitation of available markets, German industrialists negotiated a series of cartel agreements which gave to each national group in a given industry a share in European export markets without the necessity of fighting for it. By adroit maneuvers and subtle strategy they used the cartels to promote German political ascendency and at the same time to enrich themselves.[32]

Moreover, German industries operated on a very narrow raw material base. Of the basic raw materials only iron, coal, and potash occurred locally in abundance. The need for a dependable supply of other raw materials prompted vigorous and persistent efforts to win control of foreign supplies. Here again the cartel afforded a convenient instrument. The experience of the aluminum industry is a good illustration.

Germany had no good bauxite deposits within its borders and

31. *Op. cit.*, p. 113.
32. See W. F. Bruck, *Social and Economic History of Germany From William II to Hitler, 1888–1938*, Oxford University Press, London, 1938, *passim.*

was deficient in cheap hydroelectricity. Hence the domestic industry developed chiefly as a refiner of foreign bauxite into alumina, much of which was shipped abroad for electrolytic reduction, and as a fabricator of imported metal. The domestic cartel concentrated the purchasing power of German alumina producers and increased their power in bargaining with foreign suppliers. Germany's influence in the international aluminum cartel, originally exercised through a partly German-owned Swiss company—for many years the leading European exporter of refined metal—assured German fabricators a favorable allotment of metal supplies and a good market for their finished products.

Neither the German state nor German businessmen accepted free competition as a method of organizing production, controlling prices, and making economic adjustments. At the outset of Germany's industrialization both resorted to collective controls. In some cases the state administered the controls; in others private business and the state jointly participated in them; but in most cases the private business groups whose economic interests were most immediately affected took charge. In this way, financially independent business concerns deliberately adjusted their rival interests through allocation of markets, determination of production quotas, and control of prices.

German banking institutions played an important role in the cartel movement. The Deutsche Bank, the Dresdner Bank, the Darmstadter Bank, the Disconto Gesellschaft, and, before its absorption by Disconto, the A. Schaffhausenscher Bankverein, exercised a pervasive influence over German industry. With their interlocking directorates extending throughout the industrial field, they concentrated control and eliminated competition. The A. Schaffhausenscher Bankverein was particularly active in promoting cartels and maintained a special organization to act as selling agency and clearing house for industrial combines.[33]

### *Acceleration of the Cartel Movement*

From the depression of the seventies to 1895 the German cartel movement developed gradually and somewhat haltingly. Then its

33. *Report on Cooperation in American Export Trade*, Federal Trade Commission, Washington, 1916, Pt. I, p. 103.

pace quickened. By 1904 an official inquiry by the imperial government indicated the existence of 385 separate domestic cartels comprising about 12,000 separate establishments and covering virtually all the major industries—coal, iron, metals, chemicals, textiles, leather, rubber, wood, paper, and glass, among others. In 1911 the editor of *Kartell-Rundschau,* a monthly publication devoted exclusively to this subject, estimated the number of German cartels at from 550 to 600.[34] The cartel had become a fundamental characteristic of the industrial structure of Germany.

Nor was the influence of this typically German form of industrial organization confined to that country. In general, control of industry throughout western continental Europe had fallen into a similar pattern. In Belgium, in particular, the trend toward combination had extended to practically every important industry. The United States Federal Trade Commission estimated in 1916 that from 100 to 150 combinations for the regulation of production and sales operated in Belgium. These embraced coal and iron mining, iron and steel products, cement, superphosphates, sulphuric acid, petroleum, dynamite, textiles, dyes, and numerous products of lesser importance.[35] Although France had not developed cartels as far as Germany and Belgium, its *comptoirs* (selling syndicates) were a conspicuous feature of such heavy industry as France possessed. Its industrial leaders were represented in many of the prewar international syndicates.

### *Internationalization of Cartels*

Before World War I business amalgamation and confederation in the major industrial countries had laid a basis for the development of a cartel movement on an international scale. Centralization of industrial control within national areas was a first essential. International markets cannot be stabilized so long as they are subject to the vagaries of intranational competition. Nor, for that matter, can national markets long be effectively controlled without some barrier to competition from abroad. A protective tariff may do the job, but a cartel agreement is often more dependable, more adaptable to ever-changing contingencies.

By the beginning of the twentieth century the trend toward com-

34. *Ibid.*
35. *Ibid.*, p. 117.

bination had gone far in the United States. It was also getting under way in some of the more important British industries. Although competition was still openly, even unctuously, celebrated in both Anglo-Saxon countries, as a practical program of action it was frequently honored in the breach in many important branches of industry. As for Germany, except briefly at the onset of its industrialization, it had been free from the influence of economic liberalism.

As companies or confederated groups that had established control over national markets went beyond their borders in search of customers they resorted to similar tactics for harmonizing rival business interests in the wider sphere. International cartels were the direct outgrowth of national monopolistic consolidations and combinations. The leadership in the effort to subject international markets to collective controls naturally fell to German industrialists, who were comparatively unhampered by preconceptions of economic individualism.

Liefmann, perhaps the leading German authority in this field, listed forty products entering international trade subject to cartel agreements before 1896.[36] German and English producers were parties to twenty-two, German and Austrian producers to thirteen, German and Belgian producers to ten, German and French producers to nine. All of these cartels had German members. Twenty-six of them regulated the production of coal, iron, steel, and like items; nineteen operated in chemical and allied industries, eighteen in transportation, fifteen in textiles, eight in ceramics, seven in pulp and paper, five in electrical equipment, and eighteen in various other fields. Although the legality of American participation in such arrangements was in some doubt, particularly before 1918, Liefmann later reported that American companies were among the members of about a dozen pre-1914 cartels.[37]

Harms, another German authority, listed 114 international cartels as of 1912.[38] Precise information on membership is not available,

36. Robert Liefmann, *Die Unternehmerverbände*, Vol. I, No. 1, in the *Volkswirtschaftliche Abhandlungen der badischen Hochschulen*, Freiburg, 1897, p. 199.

37. Robert Liefmann, *International Cartels, Combines and Trusts*, Europa Publishing Company, London, 1927, p. 19. The Webb-Pomerene Act of 1918 exempted from the antitrust law export associations of domestic producers.

38. B. Harms, *Probleme der Weltwirtschaft*, 1912, pp. 250 ff., cited by William F. Notz, "International Private Agreements in the Form of Cartels, Syndicates, and Other Combinations," *Journal of Political Economy*, October 1920, p. 659.

but doubtless German firms either took the lead or participated in most of them.

While these facts throw some light on the extent of the international cartel movement before World War I, they probably understate, rather than exaggerate, its force. The 114 cartels identified by Harms were the product of formal contractual arrangements, openly avowed. Knowledge is lacking about the number of "gentlemen's agreements" among ostensible competitors in the international field.

Businessmen, at any rate, were everywhere trying to free themselves from the influence of market forces and striving to subjugate these forces. The gap between the competitive ideal and the economic reality had widened. The drift toward centralization of control, or what might be called business syndicalism, was unmistakable. Competition was by no means dead, but it was languishing.

*Chapter 2*

# GROWTH OF THE CARTEL MOVEMENT

ALTHOUGH a number of cartels were formed before World War I, the cartel movement had not yet become so inclusive as to suggest a sweeping departure from the competitive pattern in trade and industry. Such attempts as had been made to establish formal controls of output, prices, or sales of goods moving in international trade were usually of German origin. With some exceptions, they affected Europe principally. World War I suspended most of them.

The elimination of German producers from overseas and foreign markets did not of itself wreck the prewar cartels, as the withdrawal of the German members in ordinary times might well have done; restrictive cartel policies were simply no longer expedient. In war, national necessity shapes industrial policies. Not even a democratic government committed to the most extreme freedom of enterprise could tolerate connivance among its business concerns to throttle production and keep up the price of any material essential to the military effort. Moreover, since the Allied governments relied chiefly on liberal price inducements to spur production, businessmen no longer felt the need of cartel restrictions.

European and American aluminum producers, as a matter of fact, voluntarily suspended their cartel in January 1915. With current demand for the metal far outstripping productive capacity in every country, cartel restrictions on exports and prices lost their reason for existence. Possibly the government in taking over the only German plant and greatly expanding the Reich's aluminum productive capacity also influenced the decision of the non-German cartel members to cut loose. By going their own way they put themselves in a better position to meet the threat of postwar German competition.

World War I did not liquidate the cartel movement. Indirectly it provided a powerful stimulus to more widespread and vigorous

attempts to centralize control over industrial operations. Three principal postwar factors contributed to this development: first, a favorable climate of opinion; second, a radical maladjustment of productive capacity in many industries to market demand; and third, monetary instability that badly distorted price relationships between nations and industries. Doubtless the war alone did not create these factors, but it greatly aggravated them.

*The Climate of Opinion*

The war jolted people out of long-established habits and customs and prepared public opinion for experimentation in coordinated direction of economic activities. Wartime mobilization of industry was a revealing experience. It gave businessmen, no less than government officials and the public generally, new conceptions of the potentialities of disciplined, industry-wide organization of production. It showed the great gap between potential productivity and the actual rate of output reached by industry under peacetime conditions.

As Bernard M. Baruch, Chairman of the United States War Industries Board, said in his final report to the President:

> In line with the principle of united action and cooperation, hundreds of trades were organized for the first time into national associations, each responsible in a real sense for its multitude of component companies, and they were organized on the suggestion and under the supervision of the Government. Practices looking to efficiency in production, price control, conservation, control in quantity of production, etc. were inaugurated everywhere. Many businessmen have experienced during the war, for the first time in their careers, the tremendous advantages, both to themselves and to the general public, of combination, of cooperation and common action, with their natural competitors.[1]

Standardization of products and processes, specialization of plants, exchange of technical information, and dovetailing of outputs through systematic scheduling of plant operations throughout entire industries yielded startling economies. Such measures not only overcame the handicap of a depleted labor force, but frequently increased output by 25 to 50 per cent. They betokened production miracles that might be achieved after the war, once the cream of the labor force

1. *American Industry in the War*, Government Printing Office, Washington, 1921, p. 99.

again became available, if central coordination of activities in entire branches of industry could be worked out on a world-wide basis in a peacetime atmosphere, free of the compulsion of hasty decision.

*Peacetime Planning vs. Wartime Mobilization*

Many people, economists among them, saw visions of a veritable postwar millenium. But to many businessmen the prospect was a nightmare of glutted markets and vanishing profits. Neither group, however, took adequate account of the sharp differences between planning production for war and for peace. In wartime, with national security threatened, patriotism demands the subordination of special interests, individual preferences, and private ambitions. Furthermore, though the question of precisely what the community needs for survival—more guns or more ships or more planes—is not always easy to answer, everyone agrees that the decision should rest with military experts. In any case the range of choice, and hence the room for difference of opinion, is far narrower than in peacetime. Then it becomes a question of what the community wants, and opinions about that differ widely. Freed from external danger, the more democratic the community, the more strenuously will its component groups resist suppression of their diverse conceptions of what and how much to produce, of who should do this and who that.

The conviction spread after World War I that the price of the potential benefits of sustained high-level production under a planned economy would be high. Indeed, wartime experience had given rise to popular irritation over limitations on consumers' freedom of choice and on business discretion in the investment and use of capital. Continuation of a policy of industrial regimentation would probably have provoked strong popular revulsion. In any event, general approval met President Wilson's declaration, immediately after the Armistice, that the administration's policy was to take the harness off business.

Our people . . . do not want to be coached or led. They know their own business, are quick and resourceful at every readjustment, definite in purpose, and self-reliant in action. Any leading strings we might seek to put them in would speedily become hopelessly tangled because they would pay no attention to them and go their own way . . . It is surprising how fast the process of return to a peace footing has moved in the three weeks since the fighting

stopped. It promises to outrun any inquiry that may be instituted and any aid that may be offered. It will not be easy to direct it any better than it will direct itself.[2]

While businessmen, in America and in Europe, acclaimed the decisions of their governments to abandon the wartime policy of centralized coordination and coercive control, they showed no disposition to give up the advantages of mutual cooperation. Apparently the main ground for opposition among businessmen to peacetime industrial mobilization was not that it limited managerial discretion, but that the limitations would be imposed by governmental authority or at any rate be subject to its scrutiny.

To coordinate investment and operating policies in an industry, restrictions on what independent concerns might choose to do were plainly unavoidable. Patriotism and self-interest combined to make business willing to cooperate in wartime industrial mobilization plans, formulated and administered by governmental agencies that also supplied big orders at profitable prices.[3] But business could see no justification for the continuation of government controls when the civilian market again became the chief source of the purchasing power on which industry depended. In short, it was generally assumed that unless government provided the demand it should not give the direction.

But business leaders were not prepared to forego in peace all the advantages of centrally coordinated industrial activity. They sought, rather, to obtain those advantages by mutual accommodation. The extent and prevalence of waste in industry under a competitive private enterprise regime impressed business executives no less than others.[4] But if industrial coordination was to be the order of the day, businessmen wanted to do the coordinating themselves. Negatively, their slogan was "less government in business"; positively, "self-government in industry."

Wartime experience pointed up the basic issue of whether the policies of separate enterprises in each industry should be consciously

2. From President Wilson's Sixth Annual Message to Congress, December 2, 1918.
3. The fact that dollar-a-year men drawn from the ranks of corporate management comprised, in the main, the executive staffs of the improvised agencies that exercised control probably made business more willing to accept government supervision in wartime.
4. Cf. *Waste in Industry,* Federated American Engineering Societies, Washington, 1921.

articulated. It also raised collateral issues hardly less crucial. How define the goal of peacetime industrial coordination? What should be the nature of the agency empowered to coordinate industrial operations? Business had a ready answer. If a government *of* business was to be introduced, it should, in accordance with supposedly well-settled democratic principles, be a government *by* business and *for* business. This reaction from the discipline of a war economy found expression in President Harding's slogan "return to normalcy." Patriotic submission to government authority in wartime yielded to a reassertion of private interests. Apathy toward social obligations and cynicism about social solidarity replaced the crusading spirit of a war to make the world safe for democracy. This state of opinion, perhaps more than anything else, made of the postwar years a period of incubation for cartels.

*Industrial Maladjustments*

The war brought about many industrial maladjustments that also fostered cartelization. In all the belligerent countries, the conversion of plants to military production and the expansion of productive capacity in such strategic industries as steel and shipbuilding caused a drastic dislocation of industry. This war-made industrial structure was ill adapted to peacetime ends. It was lopsided. Although business recovery during the twenties temporarily obscured and partially overcame this imbalance, it by no means corrected it.[5] Indeed, the efforts of the defeated Central Powers, particularly Germany, to reorganize and rationalize their basic industries actually increased maladjustment in some sectors of the world economy. So also did the widespread quest for national economic self-sufficiency that followed a peace settlement that stimulated the Balkanization of Europe and fomented deep political rivalries.

A shift in the emphasis of investment and productive efforts in non-European countries had occurred during the war in response to the enormous increase in the demand for foodstuffs and raw materials. Productive capacity in agriculture and mining outside Europe had expanded far beyond possibility of economical utilization with Europe at peace. After the war, to insure a better domestic balance

5. See *World Economic Survey, 1931–1932,* League of Nations, Geneva, 1933, pp. 22-24.

between raw material and manufacturing industries, the big industrial countries instituted programs of economic nationalism which aggravated the world problem of surplus capacity.

Commodity stocks greatly expanded during the twenties, indicating how difficult it was for the so-called primary producers in the "colonial" areas to adapt their productive capacity to the radically altered postwar situation. World stocks of wheat increased from 626 million bushels at the end of 1922 to 926 million bushels in 1930. World stocks of sugar increased from 5.7 million short tons in 1922 to 11.8 million tons in 1930. World stocks of rubber increased from 209,000 metric tons in 1922 to 493,000 tons in 1930.[6]

Although in 1922 the carry-over in each of these three basic raw material fields was not only abundant but excessive, the situation had become progressively worse by the end of the decade. Wheat stocks in eight years had increased by 50 per cent, and both sugar and rubber stocks in the same period had more than doubled. In the nonagricultural raw material industries, chiefly mining, inability to adjust supply to demand was less apparent. Nevertheless, surplus capacity accumulated in some mineral industries.[7]

### *Resistance to Readjustments*

The needed readjustments would have proved costly and neither manufacturers nor raw material producers were prepared to shoulder the burden of making them. The immediate line of least resistance was more attractive. It was easier—and immediately less costly—to restrict production and maintain prices than to abandon an unprofitable venture and seek better returns elsewhere. Consideration of the heavy losses on invested capital which the latter course would involve reinforced the natural disposition to bear the misfortunes one has rather than fly to others one knows not of.

6. Cf. *Economic Stability in the Post-War World,* League of Nations, Geneva, 1945, p. 85.

Weather changes seriously affect the volume of agricultural stocks carried over from year to year, so that a comparison of the carry-over in two widely separated years does not by itself provide an adequate basis for judgment of the rate of supply. Nevertheless, in this case an elaborate statistical study would only confirm the impression one gets from the data in the text.

7. For example, zinc and bituminous coal. See W. Y. Elliott and others, *International Control in the Non-Ferrous Metals,* Macmillan, New York, 1937, Chap. 12, and *Energy Resources and National Policy,* National Resources Committee, Washington, 1939, pp. 110 ff.

Moreover, paternalistic governments frequently undertook to temper the adverse tendencies, thus obscuring the gravity and extent of underlying economic maladjustments. By protective tariffs, debt moratoria, subsidies, government loans, and comparable measures, they relieved financial pressure. But these tactics only gave harassed producers in distressed areas and sick industries a false sense of security. They did not stimulate a dynamic movement toward healthy readjustment. They only put off the day of reckoning.

Conceivably, business might by these means have been able to carry the burden of the war-created excess capacity in a number of basic industries until the growth of other branches of production redressed the balance in the economy. An example is the rapid development of American manufactures in the last quarter of the nineteenth century, offsetting the overexpansion of transportation facilities by subsidized railroad construction in the two preceding decades. For history thus to repeat itself, at least two conditions would have been essential: a continued rapid growth of population and an advance in productive efficiency at the same pace as the development of technology.

Unfortunately, neither of these conditions was provided. The world-wide depression of the thirties brought to light and intensified many ill-adjusted situations which were obscured in the general speculative boom of the twenties. Neither the public nor business escaped the social and economic costs of correcting the serious industrial maladjustments inherited from World War I. Ostrich-like tactics only compounded those costs.

*Monetary Instability*

Monetary disturbances were another major factor underlying the decline of competitive markets and the development of organized market control after World War I. Governments everywhere financed their war effort largely through inflation. Although they taxed heavily, they generally borrowed more heavily. In the course of the war the public debt of the United States increased more than twentyfold, of Britain more than tenfold, and of France and Germany each more than sixfold. These huge funds of borrowed purchasing power did not represent a mere diversion of purchasing power from private lenders to their respective governments. Rather,

by and large, the lenders themselves became bank borrowers in order to become lenders, that is, government bond purchasers. This method of financing tremendously increased the amount of money in circulation in all belligerent countries, and its purchasing power correspondingly declined.

The vast expansion of bank credit, extended upon the security of these wholly unproductive government loans, diluted the currency. In effect, war finance debased the currency in all the principal belligerent countries. Gold reserve ratios declined. Prices rose. As costs generally increased less rapidly than selling prices, profits increased. Investments were made or revalued accordingly. This process of capitalization and recapitalization of the high wartime earnings reared a financial structure that could not be supported in peacetime on the basis of prices and earnings measured in currency units convertible into gold at prewar ratios—without dangerous inflation of credit.

The financial position of governments after the war left them this choice: either devaluation, or severance of the tie to gold and a resort to unbridled inflation. Germany chose the latter course. Though most governments resisted devaluation, eventually all of them had to accept it as the lesser evil. France devalued in 1926 and again a decade later, Great Britain cut the pound sterling loose from gold in 1931, and the United States, after making the dollar inconvertible into gold in 1933, devalued it in 1934.

In some instances, when a government made its currency convertible into gold or gold exchange at a new ratio, it undervalued it so that a given amount of gold had a greater purchasing power at home than abroad. This happened in the case of the French devaluation. In other instances, the government overvalued the currency, as, for example, when England attempted to restore the gold standard in 1925 and in doing so crippled British export industries. These unilateral and inharmonious maneuvers produced an erratic and unpredictable movement of foreign exchange rates that greatly handicapped world trade.

In many sectors of the economy private business concerns likewise found it difficult to conduct their financial affairs in an orthodox manner after the war. With their war-inflated capitalization, the most certain way to meet their obligations to creditors and realize

even moderate returns for stockholders was to resort to one kind or another of artificial props to prices. Numerous industries had heavy investments in assets purchased at high prices. Agriculture, mining, and manufacturing generally were in this condition. The situation plainly required either a drastic scaling down of capital and liquidation of debt or a reduction of costs and stabilization of prices. The postwar depression starting in 1920 gave business some of the former medicine, but it was an unpalatable remedy. A wide and vigorous search for ways to reduce the real costs of production brought encouraging results in some industries.[8] The most notable achievements in increasing efficiency were in the newer industries, such as automobiles, electrical apparatus, and chemicals, but startling improvements were also effected in some older fields, for example, glass manufacture. In general, however, cooperative action to stabilize prices brought quicker results and proved more attractive.

*Business Strategies for Meeting Postwar Risks*

Though price stabilization measures were common, in some cases individual firms tried to enlarge their profits by means requiring even further investment, for example by a large-scale advertising campaign, or by the extension of consumer credit. Sometimes, again, the members of an industry sought governmental relief through tariff protection, exemption from excise levies, or special treatment in corporation income-tax laws. Thus, in facing the postwar dilemma of either writing down inflated capital values or increasing earning power, business generally preferred the latter way out of its difficulties and concentrated mainly on holding up prices. Though the expedients for increasing profits were varied, they frequently involved some degree of concerted action, industry-wide in scope.

Strategies differed from time to time, from industry to industry, and from country to country. German industry went in more ardently for rationalization than did British or American industry. While British businessmen strove to rationalize and stabilize, eventually they came to rely chiefly on the protective tariff. America was distinctly partial to systematically organized stabilization. In trying to

8. *Productivity and Unit Labor Cost in Selected Manufacturing Industries, 1919–1940,* Bureau of Labor Statistics, Washington, 1942. See also Colin Clark, *The Conditions of Economic Progress,* Macmillan, London, 1940, pp. 282 ff. and sources there cited.

counteract the basic factors making for an unhealthy economic situation, however, businessmen and statesmen in all the leading industrial countries adopted closely parallel policies. These policies added up to a general drift away from economic liberalism and competitive individualism.

Early in the postwar period, attempts to carry forward the wartime pattern of industrial regimentation in new forms of organization under governmental sponsorship and supervision were popular. A lively agitation arose in the United States for the Plumb Plan (railroad reorganization), in Great Britain for the Whitley Councils program (industrial "parliaments"), and in Germany for the *Zwangsyndikaten* (compulsory cartelization). But these movements all proved abortive. Outside of Russia, industrial coordination programs developed mainly through the voluntary action of businessmen. Counterrevolution in Germany, Tory government in England, and the "return to normalcy" in the United States reflected a sharp reorientation in the outlook of the general public. People everywhere were weary of crusading. They were emotionally tired after four years of war. They wanted to be let alone.

### *Postwar Trends of Policy and Practice in the United States*

An early portent of this reactionary trend in the United States after the war was the decision in the United States Steel case in 1920.[9] In absolving the largest industrial consolidation in the world from the charge of having violated the antitrust laws, the Supreme Court assured big business that "size is no offense." With mergers thus given a clear road, many persons, including others than businessmen, thought that small businesses should likewise have greater freedom to advance their collective interests. The law seemed to discriminate against the little fellows. Herbert Hoover, as Secretary of Commerce, made the promotion of their interests his special concern. He carried on a vigorous campaign for the organization of trade associations.[10] Its primary aim was the advancement of efficiency, to be achieved through well-engineered programs of simplification, standardization, and stabilization. Eventually, in 1925, in

9. *U.S.* v. *United States Steel Corp.*, 251 U.S. 417 (1920).
10. See, for instance, his "Introduction" to the volume *Trade Association Activities*, Department of Commerce, Washington, 1923.

the Maple Flooring Association and the Cement Association cases, the Supreme Court gave its blessing to this movement.[11]

Business was by no means obligated to go to the courts to determine the full scope of its new freedom. Businessmen anxious to avoid running afoul of the law could obtain the advice of the Department of Justice on merger projects and trade association activities. This practice of "clearing" contemplated business moves appeared to give them a firmer legal basis and thus probably stimulated the growth of business confederation. Similarly, during the Coolidge administration the Federal Trade Commission encouraged business collectivism by its trade-practice conference procedure.

Meanwhile Congress had been busy, even before 1920, removing the obstacles to business cooperation. In 1918 the Webb-Pomerene Act[12] authorized the formation of combinations among competitors in export trade for the joint regulation of their market policies. In 1920, by the Merchant Marine Act,[13] Congress gave marine insurance companies and shipping lines the privilege of jointly fixing their rates. Congress not only sanctioned business self-help in this sphere, but granted enormous subsidies to private shipping interests, both directly and through the United States Shipping Board and the Emergency Fleet Corporation.[14]

### *Business Falls Into Line*

While the courts, the President, and Congress vied with one another to stimulate trade organization and concerted industrial discipline, business seized its opportunity. The merger movement developed in the twenties on an unprecedented scale, overshadowing even the trust movement of a quarter century earlier.[15] The

11. *Maple Flooring Association* v. *U.S.*, 268 U.S. 563 (1925); *Cement Manufacturers' Protective Association* v. *U.S.*, 268 U.S. 588 (1925).
12. 40 Stat.L. 516.
13. 41 Stat.L. 988.
14. The shipbuilding and ship-leasing program of the Emergency Fleet Corporation, begun during World War I, involved expenditures eventually aggregating $3,250,000,000. The direct subsidies that followed, under the Subsidy Act of 1928 (45 Stat.L. 689), led to such flagrant misappropriation of public funds that after the disclosures of the congressional investigating committee of which Senator Hugo Black was chairman (S.Rept. 898, 74th Cong., 1st sess., 1935), the government abandoned the whole policy.
15. See Willard Thorp's estimates published in the report of the President's Conference on Unemployment, *Recent Economic Changes*, McGraw-Hill, New York, 1929, pp. 184-87. The report of the President's Research Committee on Social Trends, *Recent Social Trends in the United States*, McGraw-Hill, New York, 1933, Vol. I, p. 246, contains additional data.

number of national and regional trade associations annually attained new highs.[16] Though the avowed purposes of these groups were, as a rule, prudently phrased in such euphemistic terms as "open competition," "market stabilization," or even "the application of the Golden Rule in business," [17] the Federal Trade Commission found behind the verbiage evidence of a determination in many quarters to buttress vested interests.

Not every trade association became a camouflage for a secret agreement fixing prices, restricting output, or confining trade to so-called legitimate channels. Important changes in business policy accompanied these changes in the industrial structure and in market relationships. In general a more accommodating attitude toward trade competitors displaced the earlier every-man-for-himself doctrine of extreme individualism. The growth of group consciousness in business circles was an outstanding development in the twenties. Businessmen who were slightly intoxicated by repeated draughts of the new wine from the old bottle, "United we stand . . .," found almost loathsome the few nonconforming teetotalers. As correspondence in many trades clearly reveals, ridicule, derision, and ostracism, even when more forceful means were not used, exerted a strong influence toward group solidarity.[18]

At any rate, price cutting was rather effectively tabooed. The practice of following the leader in pricing became the common rule in a wide range of industries. This leadership principle took the main pressure of competitive forces off prices. It diverted trade rivalry into brand competition, service competition, and interindustry competition. So characteristic and pronounced a feature of the "new era" of business was this sublimation of price competition that a prominent trade association executive declared: "Competition at all times should be based on quality and service and never on prices." [19]

16. Consult *Open Price Trade Associations,* Federal Trade Commission, Washington, 1929, pp. 30-31.
17. *Ibid.,* p. 305.
18. *Ibid.,* pp. 255-79 and Chap. 8. Group opinion influences businessmen no less than other people. What the accepted canons of conduct among the group to which one belongs condemn as morally reprehensible often shapes behavior more rigorously than legal prohibitions.
19. *Ibid.,* p. 296.

*The New Deal Accelerates the Tempo*

The advent of the New Deal brought little modification in this general pattern of public policy and business practice. On the contrary, the National Industrial Recovery Act in essence merely reaffirmed and more effectively implemented the policy of encouraging concerted agreements to regulate specific industries. After virtually suspending the antitrust laws, Congress, in effect, gave authority to "truly representative trade or industrial associations" to draft and administer "codes" stipulating the trade practices, and even prices, which all members of the codified industries were obliged to follow. Plainly, the National Recovery Administration simply raised self-government in industry to a new plane.[20] Whereas confederated action had previously depended on voluntary agreement and mutual self-restraint among the principal concerns in an industry, autonomous groups could now enforce collectively established trade policies against any recalcitrant minority. This was self-government in industry by majority rule; and it spelled, of course, the stifling of competition in nearly all spheres of trade and industry.

Such a radical departure from traditional public policy was bound to meet opposition. It assumed, in fact, a harmony of interests among all the various enterprises, large and small, integrated and non-integrated, high-cost and low-cost, old and new within each field, and operating in different fields—a harmony that did not exist. In the end, even those businessmen who had vigorously supported the experiment in self-government welcomed the Schechter decision which released them from the trammels of NRA.[21] And a bewildered consuming public was equally relieved by the restoration of opportunity again to shop around with a better chance of finding a good buy among competing products.

In spite of the rehabilitation of the antitrust laws and the launching, under Thurman Arnold, of a policy of vigorous enforcement, industry did not revert to unrestricted competition. For one thing,

20. As the Brookings Institution's study, *The National Recovery Administration* (Washington, 1935, p. 568), states, the codes represented "usually the work of trade association officials or of dominant personalities within the industry."

21. As one careful student observed, "the point must be made emphatic that the NRA was a device conceived by business, put into effect by business, administered by business men, and finally, in the Schechter decision of May, 1935, demolished by the Supreme Court on the instance of business men." Theodore J. Kreps, *Business and Government Under the National Recovery Administration*, Institute of Pacific Relations, New York, 1936, pp. 18-19.

the new business habits of side-stepping competition were not readily broken. For another, while legally enforceable "codes" had proved unmanageable, privately administered arrangements for control of the market gave promise of being more workable, partly because their voluntary basis confined them to less ambitious goals. The associations and institutes NRA had fostered, which had served as quasi-official agencies, continued to function on behalf of less comprehensive programs.[22]

Congress itself gave renewed evidence of its continued support of the strategy of economic planning. It did so most signally through the re-enactment of the Agricultural Adjustment program, after the Supreme Court declared the original measure unconstitutional [23] and by the repassage of the Bituminous Coal Conservation Act after the original measure had met a judicial veto.[24] Indirectly, too, Congress showed its sense of the growing need of a more positive approach to the problem of maintaining a balanced economic development by establishing the Tennessee Valley Authority,[25] the National Resources Planning Board,[26] the Office of Coordinator of Transportation,[27] and a federal administrative agency to enforce state oil proration.[28]

22. As exemplified by the activities of the Sugar Institute and of the American Petroleum Institute, which were among the first to learn that invalidation of NRA meant an end to the suspension of the antitrust laws. *Sugar Institute* v. *U.S.*, 297 U.S. 553 (1936); and *U.S.* v. *Socony-Vacuum Oil Co., et al.*, 310 U.S. 150 (1940).

23. In the case of *U.S.* v. *Butler*, sometimes called the Hoosac Mills case, 291 U.S. 1 (1936), the Supreme Court invalidated certain provisions of the Agricultural Adjustment Act of 1933. After this decision came a series of congressional measures having similar aims but circumventing the ban on the processing tax. Of these the most important were: the amended Soil Conservation Act of 1936 (49 Stat.L. 1148); the Agricultural Marketing Agreement Act of 1937 (50 Stat.L. 246); and the Agricultural Adjustment Act of 1938 (52 Stat.L. 31).

24. In *Carter* v. *Carter Coal Co.*, 298 U.S. 238 (1936), the Supreme Court held that the main provisions of the Coal Conservation Act of 1935 (49 Stat.L. 991) violated the Constitution. Congress responded to this rebuff by passing the Bituminous Coal Act of 1937 (50 Stat.L. 72).

25. Through the Act of May 18, 1933, 48 Stat.L. 58. For subsequent amendments strengthening TVA, see U.S. Code, Title 16, c. 12A.

26. Originally established, as the National Resources Committee, by Executive Order of June 30, 1934, the Board received congressional authority under the terms of the Act of June 7, 1939, approving the President's Reorganization Plan No. 1. This authority lapsed and the President dissolved the Board four years later.

27. By the Act of June 16, 1933, 48 Stat.L. 211. The Office ceased to exist after the Transportation Act of 1940 (Act of September 18, 1940) transferred part of its functions to a temporary board of investigation and research. The Office fulfilled its main function by laying the groundwork for the consolidation of all regulatory authority over interstate carriers (except air carriers) in the Interstate Commerce Commission, as provided by the 1940 Act.

28. Under the Connally Act of February 22, 1935, which has been thrice re-enacted, the Secretary of the Interior set up the Federal Tender Board which polices the pipelines to prevent interstate movement of so-called "hot oil."

Right up to the outbreak of World War II and the reinstitution of industrial mobilization, the trend of American economic policy and industrial organization was toward increasing concentration of control. As President Roosevelt declared in his message of April 29, 1938, recommending the Temporary National Economic Committee investigation:

> Among us today a concentration of private power without equal in history is growing . . . We have witnessed the merging-out of effective competition in many fields of enterprise . . . On the other hand, we have some lines of business which are genuinely competitive . . . If private enterprise left to its own devices becomes half-regimented and half-competitive, half-slave and half-free, as it is today, it obviously cannot adjust itself to meet the needs and demands of the country . . . We must find practical controls over blind economic forces as well as over blindly selfish men . . . Concentration of economic power in the few and the resulting unemployment of labor and capital are inescapable problems for a modern "private enterprise" democracy.[29]

The President might have added that concentration of economic power in the government had also been growing, even if not at the same pace as private monopolistic controls, and that this trend may likewise be a challenge to modern democratic society.

*Industrial Rationalization and Cartelization in Germany*

Departures from the theory and practice of competition were far more marked in the industrial reorganization and public policy changes after World War I in Germany than in the United States.[30] In a broad way the shift from Rathenau's *Planwirtschaft* (planned economy) to Hitler's totalitarianism epitomized the change.

In the immediate post-Armistice period, defeated Germany indulged in a brief flirtation with a comprehensive program for the social control of industry. The leaders of the German Republic advocated "socialized industry," and the government actually organized *Zwangsyndikaten* (compulsory cartels) in three basic industries.[31] In the electrical industry the state implemented its "socialization" program in

29. S.Doc. 173, 75th Cong., 3d sess.

30. For the over-all picture consult F. Neumann, *Behemoth*, Oxford University Press, Toronto, 1942; and Robert A. Brady, *Business as a System of Power*, Columbia University Press, New York, 1942, Chap. 1.

31. Coal, potash, and steel. However, the latter proved only temporary, the Eisenwirtschaftsbund (Iron and Steel Economic Council) being shortly liquidated. See H. von Beckerath, *Modern Industrial Organization*, McGraw-Hill, New York, 1933, pp. 222 ff.

a different way by large-scale investment of public funds in superpower systems and generating facilities, though it did not completely carry through the most ambitious scheme of all, the Rhine-Elbe Union, fathered by Hugo Stinnes.

Basic to the German economy is the coal industry, which the Coal Act of 1919 completely regimented. The Reichskohlenverband (National Coal Federation) became the top unit of an all-embracing structure which included the powerful Rhine-Westphalia Coal Syndicate, a cartel originally organized in 1893 which controlled fully 80 per cent of the German output. The Coal Act nominally provided for national control of the industry through the Imperial Coal Council, on which consumers and the miners were represented, but in practice the coal magnates themselves made the actual decisions on output, market distribution, and prices.[32]

Though the German Republic deliberately fostered the cartel movement, as the German Empire had done before the war, cartels played a relatively minor role immediately after World War I. The violent price fluctuations up to 1924, when the inflation ended, made attempts at price control futile. The most marked characteristic of the industrial transformation in this period was the development of stupendous combination schemes, outstanding examples of which were those engineered by Hugo Stinnes and Fritz Thyssen.[33]

The cartel decree of November 9, 1923 was a gesture toward placing these private monopolies under public regulation. However, during the decade before the advent of Hitler the Cartel Court established by this decree exercised its supervisory functions exclusively for the purpose of coercing recalcitrant minorities.[34] The Court occasionally penalized cartel members for failure to abide by the jointly established rules and selling terms, but in no case did it disband a cartel for the statutory offense of "abuse of economic power."

32. The chairman and founder of the compulsory cartel was Emil Kirdorf, who was a coal operator and a member of the Gelsenkirchener group. Other members of the executive committee included representatives of the Krupp, the Harpener, the Mannesmann, the Stinnes, the Thyssen, and the Gutehoffnungshütte concerns. Cf. A. H. Stockder, *German Trade Associations,* Holt, New York, 1924, pp. 192 ff.

33. See Rudolf K. Michels, *Cartels, Combines and Trusts in Post-War Germany,* Columbia University Press, New York, 1928, pp. 28-29, and *passim.*

34. Otto Nathan, *The Nazi Economic System,* Duke University Press, Durham, 1944, p. 68. See also K. Pribram, *Cartel Problems,* The Brookings Institution, Washington, 1935, pp. 174, 189; and F. Haussman, *Die wirtschaftliche Konzentration an ihrer Schicksalswende,* Recht und Gesellschaft, A.G., Basel, 1940, Pt. D.

After the stabilization of the mark in 1924 German industry, taking advantage of the concurrent relief afforded Germany from the reparations burden, undertook a thoroughgoing "rationalization" and cartelization program.[35] Funds borrowed abroad, largely from America, greatly aided this program. At all times the German Government fostered this reorganization on lines of centralized control and unified administration, and in many instances helped it by the grant of subsidies and special privileges.

### *"Master Race" Industrialists Mobilize Early*

With the aid of the big banks, and under their spur, German businessmen formed many of the giant combines in these years which later played a vital role in the direction of the German economy and in the evolution of the totalitarian state. From this period date, for example, as full-blown corporate amalgamations, the I. G. Farbenindustrie (the chemical trust), the Wintershall potash combine, the Vereinigte Stahlwerke (the steel trust), and the Vereinigte Aluminiumwerke (the aluminum trust), the last two partly financed and owned by the state. These big business units ranked with older concerns such as Metallgesellschaft in nonferrous metals, Krupp in iron and steel, Stinnes in coal and electricity, Allgemeine Elektrizitäts Gesellschaft and Siemens-Schuckert in electrical appliances and equipment. A complex web of joint interests, mutual interdependence, and common association (through banking affiliations, interlocking directorships, and frequently even family connections) bound all of them indissolubly together.[36] The capstone of this centralized structure of German industry was the Reichsverband der Deutschen Industrie (National Federation of German Industry).

After the Nazis seized power in 1933, with the help of the industrial hierarchy, a few new names appeared among the industrial *Herrenvolk* (master race). Perhaps the most important of them was that of Hermann Goering, who promoted the new combination in the coal, iron, and steel industries that bore his name. The alleged purpose for launching this enterprise, which from the outset had the support

35. Consult Robert A. Brady, *The Rationalization Movement in German Industry,* University of California Press, Berkeley, 1933; and D. Warriner, *Combines and Rationalization in Germany,* King & Son, London, 1931.

36. H. Levy, *Industrial Germany,* Cambridge University Press, Cambridge (Eng.), 1935, Chap. 10; and H. Wagenführ, *Kartelle in Deutschland,* Krische & Co., Nuremberg, 1931.

of the Nazi Party and the backing of state funds, was to develop low-grade domestic mineral reserves as a national defense measure. But its rapid expansion owed more to its special privilege of unhindered expropriation of Jews and of business interests in conquered countries than to any other factor.

*German Cartels Not Impaired by Nazis*

These powerful business groups bestrode the German economy until its collapse at the end of World War II. The Nazi regime did not impair the functioning of this centralized industrial hierarchy.[37] Indeed, to implement the decrees of the totalitarian state the Nazis employed agencies similar to those that the Weimar Republic had used in re-establishing Germany as a great industrial power after its eclipse in 1918.

With typical German thoroughness, the Nazis divided the German economy into eight "national groups" (*Gruppen*), each having a coterie of subordinate "economic groups" representing particular trades or branches of industry.[38] But these groups were, in many cases, no more than new names for old organizations. Specifically, the Reichsgruppe Industrie (National Industry Group) was actually a continuation of the Reichsverband der Deutschen Industrie (National Federation of German Industry). Indeed, the National Industry Group took over the Cartel Bureau of this central policy-making body of German industry, and renamed it the Department of Market Regulation and Industry Management.

Similarly, other groups had their counterparts in the pre-Nazi *Fachverbände* (trade associations), or more inclusive federations, such as those for mining and for transport. For example, the Reichskohlenverband (National Coal Federation), one of the older and

37. See Robert A. Brady, *The Spirit and Structure of German Fascism*, Viking, New York, 1937; and by the same author, *Business as a System of Power*, Chap. 1. Cf. Nathan, *op. cit.*, Chap. 3.

The Compulsory Cartel Law of July 15, 1933, and the decree of September 4, 1939 mobilizing industry for war gave the government vast power over the management of industry. But the Nazis did not use it to displace private (Aryan) businessmen from their customary sources of profit. They used it only to insure compliance with Party directives looking to the aggrandizement of the Third Reich and, of course, their own political ascendancy. As the head of the Cartel Bureau of the Reichsgruppe Industrie (National Industry Group) declared in 1935, "the leadership principle ends where the purse begins."

38. Cf. Nathan, *op. cit.*, pp. 19-38; and Brady, *Business as a System of Power*, pp. 36 ff.

more comprehensive syndicates, persisted until 1941 despite the repeal in 1939 of the Coal Mining Law of 1919. Though the Reichsvereinigung Kohle (National Coal Institute) replaced it in 1941, the new agency performed identical functions through virtually unchanged personnel.[39] Aside from their names, about the only difference between the old Federation and the new Institute was that the Institute had a wider jurisdiction. It controlled coal production and trade in the conquered territories as well as in Germany.

Under the Nazis, the more things changed, the more they remained the same. Some streamlining and further centralization of the cartelized structure of German industry did take place. Hans Kerrl, the director of the several national industrial institutes, estimated that of the 2,200 pre-Nazi cartels only about 500 survived in 1941.[40] The rest had disappeared through reorganization and consolidation. Moreover, Nazi decrees made membership in the various groups compulsory and established the "leadership principle" throughout business. Nevertheless, with few exceptions, the compact clique of businessmen directing the principal combines and cartels before the Nazi regime continued to manage them and to formulate production and price policies for implementing the general directives of governmental ministries.

With the passage of time, friction developed between some industrialists and the Nazi Party leaders. Certain men, like Fritz Thyssen, disappeared from the scene and certain *nouveaux riches*, like Hermann Goering, emerged as business leaders. However, these changes did not appreciably disturb the position or lessen the power of the Krupps, the Wintershalls, the Flicks, the Poensgens, the Carps, the Roechlings, the Wolffs, the Dinkelbachs, the Mannesmanns, the Schmidts, the Schmitzes, the Boschs, the Von Schroeders, the Hubers, the Waldhausens, and the Mertons.

39. The National Coal Institute (as was true of similar *Vereinigungen* in all the other basic industries) was responsible directly to the Minister of Economics, Walther Funk. As military requirements became more and more pressing with the extension of Germany's war fronts, the scepter of administrative power over industry passed gradually from the Minister of Economics to the Minister of Munitions, Albert Speer. However, it is not clear whether any substantial impairment of the influence of the captains of industry who dominated the *Vereinigungen* under Funk's nominal oversight accompanied this shift.

40. Cf. Wagenführ, *op. cit.;* and Franz Kluge, "Reichsvereinigungen," *Die deutsche Volkswirtschaft*, 1942, p. 561; also, *Die Wirtschaftskurve*, Vol. XXI (1942), p. 198, cited by Nathan, *op. cit.*, p. 82.

Those who occupied the seats of power in Germany's highly unified industrial system had a strong incentive to extend their influence abroad through the promotion of international cartels. For in this way they could not only fortify and enlarge their economic power but also ingratiate themselves with the Nazi geopoliticians. Infiltrating democratic economies, they imposed cartel restrictions on investment, output, and employment. These restrictions helped, whether so designed or not, to soften up the democratic countries for diplomatic strokes like Munich, and even for military conquest.

### *Trend Toward Industrial Reorganization in Britain*

In Great Britain a generally parallel development of industrial policy and structural reorganization took place. As in the United States and Germany, immediately after World War I, influential voices demanded government supervision of industrial reorganization. The British Committee on Trusts in its final report in 1919 expressed grave concern over the "increasing tendency to the formation of Trade Associations and Combinations, having for their purpose the restriction of competition and the control of prices."[41] The report of its secretary, which the Committee appended to its summary of findings and conclusions, stated:

> A group of manufacturers in any branch of industry, having command . . . over the sources of material and the channels of distributing trade, may be in a position to constitute themselves a close corporation from which would-be intruders can be excluded. The prospect opening out is thus one of a series of industrial monarchies or republics, enjoying a sovereignty of their own as regards the amount they will allow to be produced and the prices at which they will sell . . . The current demand for the removal of all "controls" usually carries the implication that, in the absence of public control, supplies and prices adjust themselves . . . automatically . . . Freedom from public control will . . . mean not free competition, but concerted or unified control by private interests.[42]

This prospect the Committee viewed with unconcealed foreboding.[43]

41. *Report of the Committee on Trusts,* British Ministry of Reconstruction, Cmd. 9236 (1919), p. 2.
42. *Ibid.,* pp. 20 ff.
43. Nevertheless, the majority of the Committee simply recommended "machinery for the investigation of monopolies, trusts, and combines." *Ibid.,* p. 11. A sizable minority, however, which included Ernest Bevin, later Foreign Minister, the late John A. Hobson, and Sidney Webb, took a much firmer stand. They recommended the adoption forthwith of nationalization measures on an extensive scale.

The continuation until 1923 of the drastic provisions of the War-time Profiteering Acts also reflected popular concern over the dangers of unregulated business confederation.

However, the British public, like the American, soon relaxed its vigilance. After the tension of the war years, it was in no mood for embarking on ambitious, far-reaching projects for the social control of industry. Yet it was not inclined to rely only on competitive forces to bring about industrial adjustments regarded as essential to the recapture by Britain of its prewar supremacy in world markets. This attitude found classic expression in the final report of the (Balfour) Committee on Industry and Trade in 1929. After extensive hearings and investigations covering virtually every branch of British industry, and continuing for nearly five years, the majority of the Balfour Committee summarized its conclusions as follows:

> It is, we think, abundantly clear from our survey that the first step toward putting British industries in a position to compete successfully in overseas markets, is to subject their organization and equipment to a thorough process of reconditioning . . . It has been made plain . . . that the reconditioning of British industry will undoubtedly involve a great deal of scrapping and replacement of plant, and enlargement of the industrial unit, both by growth and by regrouping of units through consolidation and other forms of association, so as to obtain the full benefits of large scale production, elimination of waste, standardization and simplification of practise and all the other measures of economy usually included under . . . "rationalization." [44]

## *The Balfour Committee's Prescription*

The Balfour Committee proposed a solution of the problem through the well-accredited remedy of business self-help: "the first steps . . . must come from the industries themselves." [45] The Committee left no doubt about what these "first steps" should be:

> At all costs, power of access to new capital must be regained, and for this purpose measures of financial reconstruction, writing down of capital, and amalgamation with other undertakings, so as to increase the size of the business unit are, or may be among the essential measures to be taken.[46]

The only safeguard the Committee proposed against possible abuse of monopolistic power was publicity.

44. *Final Report of the Committee on Industry and Trade* (Balfour Committee), London, 1929, p. 297.
45. *Ibid.*, p. 299.
46. *Ibid.*

As to what further step, if any, ought to be taken beyond publicity, there is no consensus of opinion and we infer from this that any proposal to enable a public authority or tribunal to make an Order rectifying any abuses that may be disclosed would be unlikely to meet with general acceptance.[47]

Of a Committee membership of fifteen, seven took a more realistic view of the predicament in which British industry found itself in the postwar period. They said:

A new situation faces our country . . . Elsewhere, a rapid and general transformation in economic organization and industrial structure is going on, largely assisted by reciprocal action on the part of the State, on a scale, and at a rate which, when 1929 conditions are compared with those of pre-war . . . constitute a revolution . . . Moreover, at bottom it is a change not only of mechanics, but of motive. The keys to the new order are not competition, individual acquisitiveness or self-seeking, but coordination, science, and service.[48]

Without disputing the impact of technological developments on the structure of industry, possibly the changes in business motivation have not been as radical as this passage suggests. The minority report continued:

Along varying lines, the last quarter of a century has witnessed a mighty transformation from individualistic to cooperative methods of action. In this country the corporate structure, built up of necessity to meet the emergency of war with its demands for maximum efficiency, no matter at what cost in the scrapping of habitual notions, was hastily dismantled after the Armistice, and few of its lessons seem to have been laid to heart. Very different has been the experience in the countries which compete with us for a share of the world's trade . . . In France, combination and concentration have been applied to a long list of major industries . . . There, as in Germany, the process of reorganization and coordination has been carried through under a large measure of State supervision and assistance. The United States is popularly regarded as the home of individualism but there, too, national control over finance . . . the collective organization of industry are the dominant notes . . . In each case coordination is the major premise in the full application of scientific results to industry, both in the utilization of research, the training of management, the pooling of ideas, and the establishment of cooperative selling organizations.[49]

So the Committee minority agreed with the majority that economic liberalism was no longer compatible with Britain's industrial inter-

47. *Ibid.*, p. 190.
48. *Ibid.*, p. 304.
49. *Ibid.*, p. 308.

ests. Majority and minority reports took it for granted that a systematic reorganization of British industry along lines of combination and unified control at home would help restore its competitive power in world markets. Apparently it occurred to none of the Committee members that confederation of British enterprises in tightly bound trade groups might open the way to wholesale negotiation of international cartel arrangements rather than to a competitive struggle for foreign markets. Nor, evidently, did any of them suspect that such cartel arrangements might very well operate to curtail still further, instead of enlarging, Britain's foreign trade, even though Britain might maintain its current *share* in world markets by these essentially Fabian tactics.

The proposed policy was designed, consciously or not, to fortify British industry in a cartelized world economy. The elimination of competition among domestic concerns inevitably paves the way for the elimination of competition among companies operating in world markets. It was along this line, in any event, that British economic policy actually developed, and its objectives were even plainer in the thirties than in the twenties. Whether it is called neomercantilism or autarchy makes little difference. In either case it represents a rejection of competition as the regulator of industrial activity, a renunciation of economic liberalism as a national and international policy.

*Steps in Britain's Postwar Industrial Reorientation*

Developments marking the evolution of this policy date from the early twenties. In 1921, on motion of the Minister of Colonies, an Order in Council authorized the Stevenson Rubber Restriction Scheme. In 1923 Parliament repealed the Wartime Profiteering Acts. In 1925 a Royal Coal Commission brought in a report recommending that the government facilitate amalgamations among colliery owners and that, in carrying out such combinations, the majority have the right to coerce dissenters. The Mining Industry Act of 1926 sanctioned such amalgamations and granted the recommended powers.

The Electricity Act of the same year provided for a national grid, or interconnecting system of superpower zones. Unlike the law sanctioning coal mine amalgamations, this Act vested the powers of compulsion in a quasi-official tribunal, the Electricity Commissioners,

and placed the administration of all superpower systems in the hands of a coordinate Central Electricity Board. Doubtless Parliament's action in withholding an outright syndicalistic franchise for autonomous control of this industry was due to long-standing recognition of the monopolistic character of public utilities.

The immediate object of the Coal Mining Act of 1926 was to make mining profitable. When it proved inadequate to this end Parliament passed supplementary legislation: the Coal Mines Reorganization Act of 1930 and an amendment of this Act in 1936. These measures established control over the English coal industry on the pattern of the German *Zwangsyndikat* (compulsory cartel).[50] They fostered and helped finance large-scale voluntary mergers. More significantly, they provided the machinery whereby the associated operators in each district could buy up and close down the ostensibly less efficient mines. These transactions saddled the more efficient mines with added costs, representing carrying charges on the capitalization of collieries no longer worked. For the operating collieries had to pay a levy, comparable to an output tax, which provided the funds to reimburse owners of closed mines.

The reorganization scheme transferred discretion on output and prices from individual collieries to a central body composed of representatives of the collieries in each district. These district committees assigned production quotas to each company. The district committees also determined prices, subject to review and coordination by a Central Council. To insure conformity with these joint decisions on policy, the scheme required the collieries in each district either to set up an exclusive selling agency or to submit all their sales orders (or contracts) to the District Committee for approval. Whichever of these methods the collieries chose, they had, if the District Committee demanded it, to give the Committee's auditors access to their books and records. These controls were designed to insure that imprudent operators would not spoil the market and dissipate the collective gains of concentrated operations.

The long-run advantages, or disadvantages, of such a scheme of control are not clear.[51] But it is clear that, in the coal industry at any

50. For a more detailed account of these developments, see J. H. Jones, *et al.*, *The Coal Mining Industry*, Pitman & Sons, London, 1939.
51. See Chapters 5 and 6 for an exploration of the economic issues that industrial control schemes of this type raise.

rate, the British abandoned their traditional reliance on individual initiative and freedom of enterprise even before they launched their nationalization program under the Labor Government. They sought relief from the ills of competition in collective controls administered by and on behalf of the owners of the industry.[52]

The British have employed essentially the same devices for reorganizing iron and steel, shipbuilding, cotton textiles, flour milling, and other industries, though thus far iron and steel is the only field of manufacture definitely included in the government's nationalization program.[53] The strategy in the cotton textile industry was almost identical with that in coal. After fifteen years of officially encouraged but wholly voluntary efforts toward rationalization of the industry had proved futile, an act of 1936 created a Cotton Spindles Board to buy up and scrap surplus spindle capacity. To obtain money for this purpose the act empowered the Board to make levies on other mills in the industry.

In 1939 a more thorough measure replaced this legislation. It established a Cotton Industry Board and, extending the program to additional branches of the industry, gave the new Board authority to insure the prompt execution of the so-called "redundancy schemes." Unbiased observers report that these schemes for scrapping surplus capacity in practice have done more to eliminate "disturbing," "undependable," or in plain words, price-shading elements in the industry than to get rid of high-cost producers.[54] The act of 1939 also authorized registered members of the industry to frame and administer redundancy schemes, subject to the approval of the Cotton Industry Board.

52. Parliament passed a bill in 1938 providing for nationalization of all rights in mineral royalties. However, the Coalition Government postponed action until after the war. The Labor Government introduced a bill in December 1945 calling for an even more far-reaching reorganization scheme, including nationalization. This bill became law in June 1946 and the appraisal of mining properties followed. See *The Economist* (London), October 13, 1945, pp. 513-14; August 10, 1946, pp. 201-02, 223; October 19, 1946, pp. 609-10.

Like the act nationalizing the Bank of England, the Coal Nationalization Act provides for full ministerial responsibility to Parliament for fundamental policy decisions but otherwise leaves administration pretty much undisturbed. See Karl R. Bopp, "Nationalization of the Bank of England and the Bank of France," *Journal of Politics*, August 1946, pp. 308-18.

53. For competent surveys and illuminating interpretations of these developments, consult A. F. Lucas, *Industrial Reconstruction and the Control of Competition*, Longmans, Green, New York, 1937; and Ben W. Lewis, *Price and Production Control in British Industry*, University of Chicago Press, Chicago, 1937.

54. Cf. Lewis, *op. cit.*, p. 23.

In various branches of the iron and steel industry and in shipbuilding, reorganization proceeded along the same lines, though entirely through voluntary action, without direct governmental encouragement. However, the government's indirect support was a powerful factor in the movement. In shipbuilding, this support took the form of a subsidy program on which the government chiefly relied to maintain the industry between the two world wars.

But before the Labor Government's nationalization program, Britain's most effective and widely used instrument to foster centralization of control was the protective tariff policy adopted in 1932, in conformity with the Ottawa Accords. By making upward adjustment of tariff rates contingent on the approval of an Import Duties Advisory Committee in the Board of Trade, and by the policy of this body in granting rate concessions only on proof of the ability of an industry effectively to discipline its members and to stabilize its market, the government gave a strong boost to trade organization and restrictive schemes.

For example, the powerful and practically all-inclusive British Iron and Steel Federation, acting in close cooperation with the Import Duties Advisory Committee, determined over-all policy in fixing prices and regulating output in the iron and steel trades. In fact, appointment of the Federation's independent chairman (British equivalent of an American industrial czar) was subject to the approval of the Board of Trade. Some forty trade associations representing subsidiary branches of the industry carried out the detailed administrative job of estimating plant capacities, allotting quotas, spelling out price schedules, and checking up on compliance.

### *Self-Government in British Agriculture*

In agriculture, also, Britain applied extensively the principle of self-government in industry.[55] The Agricultural Marketing Acts of 1931 and 1933 authorized producers of a wide variety of commodities to submit to the Ministry of Agriculture voluntary schemes for the cooperative regulation of output and prices. These schemes come into effect only on approval of a two-thirds majority of all interested

55. For a judicious review of these developments, see W. H. Jones, "The Agricultural Marketing Boards," in W. A. Robson (Ed.), *Public Enterprise,* G. Allen & Unwin, London, 1937, pp. 247 ff.

producers in a referendum conducted by the Ministry. In case the producers of a given agricultural product submit no such voluntary scheme, the Ministry may set up an *ad hoc* Agricultural Marketing Reorganization Commission with authority to draft proposals which become effective on approval in a producer referendum but without reference to any poll of consumers.

The statutes permit a wide range of selection in the type of organization for regulating particular agricultural commodities. For some products, the producers have established Trade Boards and forbidden sales except through these joint agencies. For others, they have set up Regulation Boards, which prescribe output quotas for each producer and fix the price which they may charge. But in all cases the agricultural marketing boards represent producer interests only, embodying the principle of guild autonomy.

However, when Parliament amended the 1933 Agricultural Marketing Act and empowered the Board of Trade to restrict imports of any commodity subject to a marketing scheme, it authorized the Minister of Agriculture to review and, if need be, to modify the output and price policies of the relevant marketing board. A Market Supply Committee in the Ministry of Agriculture, similar to the Import Duties Advisory Committee in the Board of Trade, performs this function and, in practice, these two committees follow substantially the same procedure. Moreover, they are consistently solicitous of these "sheltered" industries.

### *Amalgamations in British Industry*

Meanwhile, even as "distressed" industries tried to improve their fortunes by collective measures, with governmental assistance, the newer industries, relying largely on their own efforts, pushed ahead in an aggressive merger program. These amalgamations sought not only to rid domestic markets of the hazards and wastes of competition, but also to enable specific British industries to present a united front in cartel negotiations with foreign producers.

An outstanding example is Imperial Chemical Industries, Ltd. (ICI), organized in 1926 under the leadership of Sir Alfred Mond (later Lord Melchett). Sir Alfred's eminence as an industrialist was due partly to the fact that under his guidance ICI became the dominant factor in British chemical markets and, with I. G. Farbenindus-

trie (IG) and du Pont, one of the major factors in world chemical markets. He also became the spokesman of an increasingly influential group of British industrialists who openly renounced their faith in competition.

Sir Alfred's book, *Industry and Politics,* published in 1928, candidly set forth his views on the shortcomings of competition and the requirements of a more promising industrial order. From the platform and the press he expounded this economic philosophy tirelessly and forcefully. These persistent efforts, coupled with his successful experience in business, made a strong impression on his contemporaries.

Competition, Sir Alfred believed, was outmoded. It "inevitably led, through the demands of hard necessity, to cooperation. . . . Cooperation must combat competition, to the discomfiture of the latter." [56] But while the decline of competition was inevitable, the new order of industrial control must be actively sponsored and guided by the banking interests—specialists in finance. "Scientific allocation of capital expenditure is absolutely necessary in successful commercial enterprises. In the past the expert financier has played too small a part in industry." [57] The results, according to Sir Alfred, had been wasteful duplication of physical plant and a heavy burden of carrying charges on excessive inventories of raw materials, work in process, and finished products.

He held that rationalization of industry through merger, community of interests, business agreement, and cartel arrangement was essential. Furthermore, Sir Alfred looked upon the combination movement within national areas not as an end in itself, but as a means of achieving cartelization on a world basis. "It must be predicated immediately that amalgamations within national industries are an essential prerequisite to the conclusion of international agreements." [58] Only by such cartel arrangements is it possible to achieve an "equitable pooling of the world's supply of the required raw materials," to insure continuing "interchange of information and invention of technical discoveries and processes," and to guarantee "equitable distribution of the products" of industry, unburdened by

56. Sir Alfred Mond, *Industry and Politics,* Macmillan, London, 1928, p. 241.
57. *Ibid.,* p. 216.
58. *Ibid.,* p. 229.

"the wasteful cost of unnecessary and often inimical competition." [59]

Sir Alfred appears to have stated accurately the position of a growing and influential body of British business leaders when he said:

> There can be no denial that there is, in modern economic tendencies, a growth, both in private industry and in public and economic thought, of the idea of the creation of greater economic units, both industrially and internationally, and I would add imperially. That tendency, which we all witness, and in which some of us have been taking part recently, is one which, to my mind, it is little use criticising and little use disliking. It is something which is happening and which is bound to continue; which we have to accept and which we have to see how to fit into our economic life, in industry, in business and imperially.[60]

Businessmen were not the only ones thinking along these lines. Many eminent economists held the same views. For example, Professor D. H. McGregor of Oxford University, a noted English student of industrial organization, opened his monograph on *International Cartels,* prepared for the League of Nations in connection with the World Economic Conference of 1927, with this forthright statement: "It is to be observed at the outset that the idea of regulating output by concerted arrangements between producers is no longer seriously opposed by economic theory or public policy."

### *The Düsseldorf Agreement*

Eventually these ideas prevailed. At the end of the thirties they found concrete, practical expression in the so-called Düsseldorf Agreement. The leaders of British industry had become so imbued with this economic philosophy, borrowed from Germany, that they could see no irreconcilable opposition to their interests in German cartelized industry, even under Nazi control. They were ready to accept the German industrialists as partners in world economic confederation.

The object of the Düsseldorf conference of March 15–16, 1939 was a general agreement between German and British industry to replace competition by cooperative exploitation of world markets. The idea was not simply to foster cartels in industries in which they

59. *Ibid.,* pp. 240 ff.
60. *Ibid.,* pp. 275-76.

had not yet developed but to coordinate the terms of various existing agreements, to extend the program to other countries, and in general to consolidate the whole movement. It was, in brief, a plan to complete the cartelization of the world economy. An agreement along these lines was embodied in a formal "joint declaration." Düsseldorf was no less a German victory than Munich, which came three months earlier. Significantly, the invasion of Poland, which started a new world war, followed within a few months these twin German triumphs, political and economic.

Officials of the British and German Governments conducted the negotiations leading up to the Düsseldorf conference. Dr. Hjalmar Schacht, President of the German Reichsbank, while in England on another mission in 1938, conferred with Oliver Stanley, then President of the Board of Trade, and a number of prominent British industrialists. These conferences were to promote closer cooperation between British and German industry. Soon after Dr. Schacht's visit the project was discussed in Parliament. Mr. Stanley expressed the government's hope that it would "be possible to initiate direct negotiations between a number of British industries and the competing industry in Germany." In the British preparation for the Düsseldorf conference, R. S. Hudson, Parliamentary Secretary of the Department of Overseas Trade, played a leading role. The conference likewise had the blessing of the German Foreign Office. Sir William Laske, Chairman of the Federation of British Industries, headed the British delegation, and Herr Ernst Poensgen, President of Vereinigte Stahlwerke, the German.

The Düsseldorf Agreement is one of those hard and stubborn facts that economists and statesmen cannot afford to ignore. It would be a mistake to brush it aside as just another instance of spontaneous groping toward better understanding, just another gesture of hands across the sea. It indicates so clearly how complete had been the renunciation of competition in both Germany and Great Britain that a full reproduction of its text is justified.

## *Text of the Düsseldorf Agreement*

The *Reichsgruppe Industrie* and the Federation of British Industries, having concluded a general discussion on Anglo-German trade relations, issue the following agreed statement:

1. The two organizations welcome the opportunity which these discussions have given of developing still further the friendly relations which have existed between the two bodies for so many years.

2. The two organizations recognize that both for Germany and for Great Britain a substantial and profitable export trade is vital to their economic life.

3. The two organizations recognize that the object of this export trade must be to give employment to their people, to improve their standard of living, and to provide a volume of foreign currency sufficient for their economic needs.

4. The two bodies are agreed that the objective to be attained is that the export of all countries should be conducted in such a way as to ensure a fair return for the producers of those countries. Hence it is agreed that it is essential to replace destructive competition wherever it may be found by constructive cooperation, designed to foster the expansion of world trade, to the mutual benefit of Great Britain, Germany and all other countries.

5. The two organizations are agreed that it is desirable that individual industries in both countries should endeavor to arrive at industrial agreements which will eliminate destructive competition, wherever occurring, but prices must be fixed at such a level as not to diminish the buying power of the consumers.

6. The two organizations realize that agreements upon prices or other factors between Germany and Great Britain are only a step, although a most important step, towards a more ordered system of world trade. They would welcome the participation of other nations in such agreements.

7. The two organizations are of opinion that negotiations should be started immediately between those industries which are already organized for the purpose. They are further agreed that the wider the area of such agreements, both as to industries and countries, the more rapidly will international trade be established on a permanently progressive and profitable basis.

8. The two organizations realize that in certain cases the advantages of agreements between the industries of two countries or of a group of countries may be nullified by competition from the industry in some other country that refuses to become a party to the agreement. In such circumstances it may be necessary for the organizations to obtain the help of their governments and the two organizations agree to collaborate in seeking that help.

9. The two organizations agree that it is their objective to ensure that as a result of an agreement between their industries unhealthy competition shall be removed. Their aim is to secure as complete cooperation as possible throughout the industrial structure of their respective countries.

10. The two organizations have agreed to use their best endeavors to promote and foster negotiations between individual industries in their respective countries. They are encouraged in this task owing to the fact that a considerable number of agreements between individual German and British industrial groups are already in existence. There is thus available a large body of ex-

perience which inspires confidence that an immediate extension of this policy is both practicable and advantageous.

They are glad to state that approximately a further fifty industrial groups have already signified their willingness in principle to negotiate at an early date.

They also report with satisfaction that negotiations have already been started and are now taking place between ten industrial groups.

11. In conclusion, the *Reichsgruppe Industrie* and the Federation of British Industries feel that the problem is not merely one of eliminating undesirable competition, but of taking concrete steps to increase world consumption of the products in which German and British industry are interested. They have, therefore, decided to maintain closer and more active relations with regard to this matter. They also recommend to individual industries that an effort should be made in any agreements that may be concluded for joint action to increase world consumption of the products in which they are interested. Again, this joint action should be considered as the precursor to a wider international collaboration between industries designed with a view to increasing world consumption and consequently production, to the benefit of all concerned.

12. The ultimate objective must be to increase world prosperity. The *Reichsgruppe Industrie* and the Federation of British Industries believe that the result of their discussions has been to lay a sound foundation upon which individual industries can usefully begin with mutual advantage.

In order to ensure the success of this policy it has been agreed between the *Reichsgruppe Industrie* and the Federation of British Industries to form a standing committee of the two organizations, which will meet regularly to review progress. The Federation of British Industries have invited the German members of this joint committee to pay a visit to England in June for this purpose, and this invitation has been accepted by their German colleagues.

### *Extension of British Control Schemes Meets Opposition*

These trends in British industrial policy and business practice toward self-government in industry and centralized control met strong opposition. The report of the Milk Reorganization Commission in 1936 condemned the policy of setting up producer controls in each separate branch of industry as not only neglectful of consumer interests but incompatible with the public interest in the widest sense of the term, and in particular with the upbuilding and expansion of the British economy.[61] This report had a wide influence. In each of

61. See Robert E. Cushman, *Independent Regulatory Commissions*, Oxford University Press, New York, 1941, pp. 558-73.

Another political scientist stigmatized the policy condemned by the Milk Reorganization Commission as follows: "The fundamental defect in this elaborate and cumber-

the four control schemes subsequently introduced (or revised) for industries directly related to the standard of living—sugar (1936), livestock (1937), herring (1938), and whitefish (1938)—Parliament vested final administrative authority in a public commission, independent of the industry regulated.

Nevertheless, in basic manufacturing industries geared to export trade, Britain made no radical change up to World War II in the pattern of government-sponsored, privately controlled monopoly, whereby for a quarter century it had sought to strengthen its competitive position in world markets. In wide areas of its economy, the land that gave birth to economic liberalism renounced it in favor of cartel schemes. Challenged for industrial supremacy by America and Germany, deprived of the competitive advantages in free markets that an initial lead had given it, severely shaken by the industrial, financial, and economic maladjustments occasioned by World War I, Great Britain virtually abandoned the traditional system of free enterprise.

### *Risks of Institutional Borrowing*

Britain borrowed its "new industrial system" mainly from Germany, just as Germany in the nineteenth century had taken over the machine technique from England. As a borrower of an alien institution, Britain had an opportunity to adapt it to its own distinctive traditions and habits of thought. In a measure, it took advantage of this privilege. The British control schemes have been frankly experimental, and on the basis of experience they have been repeatedly and promptly revised. Even the sluggish Tory Government headed by Chamberlain showed itself capable of learning from mistakes. The revisions and extensions of the schemes in the latter half of the thirties were designed mainly to provide more safeguards for the public interest.

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some machinery is that the consumer is organized in parallel [*i.e.*, not integrally] with the producer, with the result that he is excluded from the vital processes of decision and policy making. At no stage is the consumer placed in a position to influence policy, at no point is he given an opportunity to get at the facts from the inside, to see the various alternatives which were available to the board, or to obtain an insight into the forces which determined the issue. Instead, he is left outside the ring fence which encircles the happy fraternity of producers, fluttering his wings in a vain attempt to discover grounds for complaint without any right of access to books, statistics, or other relevant information." Robson (Ed.), *op. cit.*, quoted in Cushman, *op. cit.*

The Labor Government's plans for controlling industry show even more solicitude for consumer protection. The basic premise of its nationalization program is the need for industrial coordination under public control. How to carry out such a program and yet avoid structural rigidity and an unwonted degree of state paternalism is a still unsolved problem. But that does not mean it is insoluble. The British genius for compromise and ingrained skepticism of doctrinaire formulas strengthen the chances that Britain's new industrial system may be free of some of the more obnoxious features of the German cartel system.

Moreover, in resorting to institutional borrowing Britain was selective—again just as Germany had been a half century earlier. Germany took over England's machine technique, as we have seen, and rejected the economic liberalism which had grown up alongside it. Britain took over Germany's cartel system but rejected its totalitarianism.

If Britain is able to make fruitful use of the borrowed institution, uprooted from the cultural complex in which it was nurtured, it will be a real pioneer. Germany failed to assimilate the borrowed institution of the machine technique, even though superficially German industry learned how to produce mechanically with unexampled efficiency. But Germany never grasped its fundamental implications: the necessity of subordinating the machine process to humane ends. With all its limitations, the competitive market does this after a fashion. Mechanized industry not subject to the checks and balances of spontaneous economic forces expressing the varied tastes, diverse aptitudes, and disparate aspirations of a free community is a veritable behemoth.

A competitive market may not be the ideal institution for providing those checks and balances. But to make the machine technique the servant of a totalitarian state is to court disaster. Germany discovered that—too late. The contemporary wreckage of German culture attests the risks of selective institutional borrowing. England's experiment in taking over the cartel system from Germany while rejecting totalitarianism may succeed, of course. British institutions have shown their resiliency more than once, and the British people their tenacious democratic bent. With their usual common sense, and perhaps a little luck, they may yet adapt this new eco-

nomic system to a social order compatible with human dignity and the common welfare. But while this outcome may not require a miracle, the experience of Germany and other countries that have succumbed to totalitarian regimes does not lend much encouragement to those who believe that a centrally planned economic order can be achieved without sacrifice of a substantial measure of individual freedom of choice and liberty of action.

*Cartel Movement Spreads*

The evolution of economic policy and the trend of industrial reorganization took the same course in other countries as in the United States, Germany, and Great Britain, but in none was the break with the past so sharp as in Britain. In Japan, after a few decades of lip-service to free competition and free trade, the Zaibatsu (the oligarchy of Big Business clans whose special privileges held over from the feudal regime) reverted to type. In Italy, the outstanding industrial giants—Perelli, Montecatini, Fiat—helped launch a totalitarian corporate state that extended and consolidated their control over the domestic economy and equipped them to bargain more effectively in international cartel arrangements. In France, the *comptoirs* (business syndicates) sprang up in one industry after another and gained new strength everywhere. Under the leadership of the powerful Comité des Forges (Iron and Steel Federation) they took a hand in domestic politics and successfully resisted the democratic program of the Popular Front Government that threatened to break up their concentrated industrial control.

Although the development had different trappings and proceeded at different tempos, the displacement of competition as an effective means of regulating the economy was under way in every industrial country. The general trend toward nationalistic autarchy and business syndicalism, or self-government in industry, was unmistakable. Such a course of events prepared the ground for an international cartel movement of unprecedented scope.

All this is not to imply that public policy made business policy what it was. It did not. Nor did business policy, as exhibited in the changing pattern of industrial organization, shape the changes in public policy. Neither of these "linear causation" formulas accurately sums up the relationship of government and business, re-

spectively, to the new industrial feudalism that was emerging. In the matrix of actual affairs, a continuous, organic, reciprocal interaction goes on between politics and business that defies any attempt to single out the share of responsibility specifically attributable to either for the course of events. This holds true whether it is a question of the nature of the forces generating warfare or of the conditions breeding monopoly and cartelization.

# Chapter 3

## FORMS AND SCOPE OF THE CARTEL MOVEMENT

BETWEEN World Wars I and II producers everywhere sought to escape the risks and uncertainties of competition. They were no longer content to rely on self-help in a competitive struggle with business rivals. To ease the rigors of free competition and promote group welfare they turned with increasing frequency to cartel arrangements.

Although cartels came and went, the cartel movement steadily gained in intensity and broadened in compass. It represented a sharp institutional break with the economic liberalism of the nineteenth century. Private producers and public policy makers alike became less and less willing to rely on the spontaneous forces of free markets to determine business and national economic destinies. In a quest for collective security, they increasingly restricted the freedom of individual enterprise.

The temporary and spotty prosperity of the twenties did not check the movement. The Great Depression accelerated it. While the depression wrecked many cartels when declining demand tempted members to expand their individual sales by cutting prices, it also undermined a lingering faith in the efficacy of competition and brought new converts to the philosophy of economic restrictionism.

These converts were perhaps most numerous among raw materials producers, whose economic significance in the aggregate was large but whose individual operations were in many lines relatively small and widely scattered. Lacking the cohesion essential to the development of private cartels, they turned to their governments for assistance. Where they were politically powerful they generally got it.

### *Governments Sponsor Cartels*

During the thirties—in some cases earlier—the governments of the leading exporting countries sponsored international control

schemes to regulate the export of wheat, sugar, tea, coffee, tin, and rubber. These arrangements all had the same objective, namely, stabilization of the market, and a similar method, restriction of production or exports. Although the organization of production differs among these several industries, in each the cartel reflects the political influence of producers and the pivotal importance of the industry in particular areas. Wheat and sugar production are widespread and engage thousands of relatively small operators. The leading consuming countries have protected domestic producers of these two products through tariffs, subsidies, export quotas, and the like. The success of control schemes in sugar and wheat therefore requires the support of both the principal exporting and the big importing countries. This fact has made cartelization difficult, but the persistence of government efforts in many different countries to establish controls over these products reflects the expanding scope and the increasing intensity of the cartel movement.

The first international wheat agreement became effective in the summer of 1933. Under its terms, the governments of Argentina, Australia, Canada, and the United States, the leading exporters, agreed to limit the export of wheat during the crop years 1933–1934 and 1934–1935 and to divide total exports in accordance with assigned quotas. Other wheat-exporting countries, including Russia and the Danubian states, also agreed to restrict their exports. At the same time, thirteen European importing countries, including France, Germany, and the United Kingdom, undertook not to encourage any increase in domestic wheat production. They further undertook to reduce their tariffs on wheat under specified conditions.

Although the formal life of the wheat convention ended in 1935, the determination to restrict and allocate exports did not die with it. World War II interrupted discussions begun in London in 1938 among certain parties to the first agreement, looking to the revival of wheat controls on a permanent basis. Representatives of the four chief exporting countries and Great Britain resumed these discussions in Washington in July 1941 and eventually agreed on a "Draft Wheat Convention." This provided for a government wheat pool to relieve war-stricken areas, but it also provided for restriction of production, control of stocks, limitation and allocation of exports, and the fixing of minimum and maximum export prices. An Inter-

national Wheat Council was to administer the agreement.[1] The Council at its twelfth session, on July 15, 1946 in Washington, appointed a Preparatory Commission to revise the 1941–1942 draft agreement for submission to an international wheat conference.

*Sugar Brought Under Control*

Cuba, the world's largest producer and exporter of sugar, had independently taken steps to stabilize sugar prices by limiting production during the twenties. As world sugar production increased, partly in response to improved agricultural techniques but mainly because of nationalistic programs to protect domestic beet sugar producers in the principal importing countries, world stocks rose steeply and prices declined. Between 1923 and 1929 world stocks doubled and world prices were halved. The impact of these developments fell most heavily on Cuba. Sugar is the backbone of the Cuban economy. To relieve widespread distress the Cuban Government decreed sharp curtailment of the 1926, 1927, and 1928 harvests.[2] In the face of expanding output in other countries, these measures proved futile and Cuba abandoned them.

With controls removed the 1929 Cuban crop duplicated the 5,900,000-ton crop of 1925, and prices sank to new lows. Cuba then sought the cooperation of other exporting countries in stabilizing world markets. These efforts culminated in the so-called Chadbourne Plan. Representatives of Cuban, Javanese, Czechoslovakian, Polish, German, Belgian, and Hungarian sugar industries signed a control agreement in Brussels in May 1931. When joined soon after by Peruvian and Yugoslavian producers, the plan embraced all the major cane and beet sugar exporting countries. Members of the cartel agreed to restrict exports to specified tonnages over a five-year period and to centralize and segregate stocks in the several producing countries. While the plan did not directly control prices, it provided for an increase in quotas if the daily average London price for sugar rose above a specified level.

The Chadbourne agreement was not a treaty. Nevertheless, it re-

1. *Intergovernmental Commodity Control Agreements* (International Labor Office, Montreal, 1943, pp. 1-25) reproduces the 1933 agreement and the more recent Draft Wheat Convention. The pooling arrangement of the Draft Convention went into effect at once. Limitation and allocation of exports and price fixing were deferred until after the war.

2. For a detailed account of the sugar cartel, consult *Cartels in Action*, Chap. 2.

flected the trend toward governmental participation in cartel arrangements. Not only had governments sponsored several of the national producer organizations that took part in the cartel, but they generally gave legislative support to the restrictions on exports.

In spite of the inclusion of every major sugar-exporting country, even with governmental backing the Chadbourne Plan failed to stabilize world sugar markets. A successful stabilization program required the cooperation of the chief importing countries. These had continued to expand relatively high-cost beet production behind rising tariff walls or with the aid of import quotas, as the low-cost countries (both cane and beet) reduced their output. The International Sugar Agreement of 1937 insured this cooperation. The governments of major importing countries agreed to authorize the annual purchase of a stipulated proportion of their domestic consumption from the exporting countries, and the exporting countries divided the "free" world market among themselves on a quota basis. The plan also indirectly restricted production by limiting stocks to 25 per cent of annual output.

The 1937 sugar cartel was the first comprehensive intergovernmental commodity agreement to embrace both exporting and importing nations. Twenty countries, accounting for 85 to 90 per cent of the world's sugar production and consumption, joined in the systematic regulation of sugar markets.

### *Coffee Valorization*

Coffee has been subject to market control over a longer period than any other important export commodity. As the world's largest coffee producer, Brazil administered singlehanded control until 1940, when the Inter-American Coffee Agreement came into force. The state of Sao Paulo instituted the first valorization program late in 1905 to prevent price declines anticipated from a record-breaking crop. To keep up prices, the state restricted new plantings and purchased large amounts of coffee for storage. The buffer-stock operations proved successful and Sao Paulo pursued a similar policy with the 1917–1918 and 1920–1921 crops. In June 1922 the federal government passed a Permanent Coffee Defense law and set up a system of public warehouses and a finance program for regulating the release of coffee for export. The state of Sao Paulo reinforced this

policy two years later by organizing an Institute for Permanent Defense of Coffee.

The Permanent Coffee Defense scheme collapsed with the onset of the Great Depression. To arrest the decline in prices which followed, in 1931 the federal government introduced a new stabilization program. Its main feature was the systematic destruction of coffee. During the thirties, in an effort to keep up prices, the government destroyed nearly 100 million bags of coffee—the equivalent of four bumper crops. Even such wholesale destruction did not prevent an eventual price collapse as other producing countries expanded their output.

Recognizing the inadequacy of its solo program, Brazil tried through the thirties to enlist the cooperation of other South American coffee-producing states. It did not succeed until World War II drastically narrowed the market for coffee and brought United States support for a relief program. The Good Neighbor Policy and the urgent need for hemispheric solidarity sufficiently account for this interest of the largest coffee-consuming country in a price-supporting scheme. In November 1940 the United States and the governments of fourteen Latin-American countries producing most of the coffee entering into world commerce signed the Inter-American Coffee Agreement. This agreement apportioned the American market and other markets among the exporting countries on a quota basis and limited United States imports from nonsignatory countries.[3]

### *Rubber Restriction*

Rubber control began in 1917 as a voluntary restriction scheme including most British and some Dutch producers. When voluntary restriction failed in the early twenties, the British Government inaugurated the so-called Stevenson Plan. Under this plan colonial administrative officials assigned basic export quotas to plantations and regulated permissible exports quarterly on a basis of the average

3. *Intergovernmental Commodity Control Agreements* (pp. 59-68) reproduces the Inter-American Coffee Agreement and the Declaration of October 1, 1943 to extend it. For a detailed account of the operation of the several coffee control schemes consult V. D. Wickizer, *The World Coffee Economy,* Food Research Institute, Stanford University, 1943. See also J. W. F. Rowe, *Markets and Men,* Macmillan, New York, 1936, Chap. 2.

price in the preceding quarter. So severe was the restriction that the New York price of rubber rose from an average of 17.34 cents in 1922 to an average of 72.46 cents in 1925. The rise in prices encouraged expansion of output in non-British areas, the development of rubber substitutes, greater economy in the use of rubber, and evasion and smuggling among those subject to the scheme. Accordingly, the British abandoned it in 1928.

After the average annual New York price of rubber had fallen to 3.43 cents during the Great Depression, the British took steps to revise and broaden the scope of rubber control. In 1934 the governments of the United Kingdom, India, the Netherlands, France, and Siam signed the International Rubber Regulation Agreement and established an International Rubber Regulation Committee to administer it. This agreement brought the exports of the world's leading rubber producers under effective control. It was extended periodically until April 30, 1944.[4]

### *International Control of Tea*

Like rubber control, tea control began as a voluntary restriction among the leading British growers, with some Dutch support, soon after World War I. The first plan restricted the 1920 crop to 90 per cent of the average production of the five years 1915–1919. Bad weather in 1921 restricted supplies even more effectively than had the control scheme, and with rising demand the producers abandoned organized efforts to curtail supply. A decade later, however, when the market turned downward, the Dutch joined with the British in a similar program. It had little success in the face of ebbing consumer purchasing power.

It was not until 1933 that producers succeeded in placing control of tea on a permanent basis. Through their trade organizations, producers accounting for 80 per cent of world tea exports signed an agreement establishing export quotas for India, Ceylon, and the Netherlands East Indies. The British and Dutch Governments underwrote the agreement by prohibiting the export of tea in excess of the agreed quotas. An International Tea Committee, made up of representatives of the tea growers, administers the plan. The Com-

4. For a more detailed account of rubber controls see *Cartels in Action,* Chap. 3.

mittee annually determines allowable exports as percentages of standard quotas.[5]

*Tin Control Scheme*

In form and substance the International Tin Control Scheme resembles the international tea agreement. Representatives of the leading tin producers formulated the original agreement in 1931, and their governments made all producers adhere to it. According to Article I, the agreement's objective was "to secure a fair and reasonable equilibrium between production and consumption with the view of preventing rapid and severe oscillations of price." The original agreement embraced the producers of four countries—British Malaya, the Netherlands Indies, Nigeria, and Bolivia. In 1930 these countries had produced about 83 per cent of the world's tin. When Thailand (Siam) was brought into the arrangement in 1931, the plan accounted for 90.5 per cent of world output. An International Tin Committee, representing the first four signatory governments, supervised the plan.

On the renewal of the agreement in 1934, French Indo-China, the Belgian Congo, Portugal, and the United Kingdom (for the Cornwall mines) joined the cartel, making it, except for China, virtually all-embracing. Subsequent renewals have insured the continuation of control, though under the most recent one, in 1942, the machinery of the scheme has been held in reserve in view of wartime and postwar shortages.

The 1931 agreement established standard tonnages for each country and the Committee periodically designated allowable production and exports as percentages of the standard quotas. As stocks increased during the first half of 1931, despite the restrictions on production, the leading producers supplemented the official tin control program by organizing a pool to keep excess supplies off the market. The tin pool was a quasi-private syndicate financed largely by the Anglo-Oriental Corporation, a large British producer, and the government of the Netherlands Indies, which owns a preponderant share of the biggest local tin-mining companies. In the

5. The original agreement expired in 1938 but it has since been twice renewed and is still in force. For an analysis and appraisal of the scheme, see V. D. Wickizer, *Tea Under International Regulation*, Food Research Institute, Stanford University, 1944.

1934 agreement the cartel members made a buffer-stock pool an official part of the control scheme, but after the outbreak of the war, with productive capacity insufficient to meet demand, they liquidated it.[6]

*Unilateral Governmental Control Schemes*

The intergovernmental control schemes in sugar, wheat, tin, tea, coffee, and rubber reflect the growing concern of national states for the welfare of particular economic groups with which their political stability is closely identified. International treaties brought them into existence and national legislation implemented them. While the literature of control schemes customarily refers to such arrangements as intergovernmental commodity agreements, they are like private cartel arrangements in one vital respect: they represent a rejection of competitive markets as a mechanism for regulating production and trade. They limit the discretion of individual producers and shift decisions on output and prices from the market to an administrative agency. For the purpose of indicating the scope and character of the cartel movement, these arrangements may properly be classified as cartels.

Older than the multilateral governmental output restriction programs are those initiated by a single country, or bilaterally, where output of a product is highly localized. The German Government as early as 1910 established a compulsory cartel to regulate both domestic and foreign sales of potash, of which Germany had virtually a world monopoly. Similarly, before the development of synthetic nitrogen, the Chilean Government sponsored a series of cartel arrangements regulating the production and sale of natural sodium nitrate, of which Chile was the world's sole producer. Since 1918 the Japanese Government has monopolized the sale of natural camphor. The Dutch East Indies Government has for many years limited the output and regulated the sale of cinchona bark, the sole source of quinine. In 1913 the Dutch Government established the Kina Bureau in Amsterdam, an agency representing both the cinchona producers and the quinine manufacturers, that fixed prices from tropical grove to pharmacist's shop.

6. For a detailed analysis of tin control, consult K. E. Knorr, *Tin Under Control*, Food Research Institute, Stanford University, 1945.

Italy and Spain customarily supply most of the world's mercury, and government-owned or government-controlled companies now produce most of it. Though originally the Rothschilds monopolized the trade, in 1928 the Italian and Spanish Governments established a joint agency, Mercurio Europeo, to regulate the sale of mercury in world markets. The cartel allotted export quotas to the two countries (40 per cent to Italy and 60 per cent to Spain), fixed uniform prices, and conducted sales through exclusive agents. The Spanish Civil War interrupted the cartel regime, but the parties re-established it in 1939. According to a trade publication, the cartel has followed "the good old-fashioned principle of making prices all that the traffic will bear." [7]

*Voluntary Cartels*

Private cartels are more numerous, more diversified in form, more flexible in operating policy, frequently more effective, and in the aggregate of greater significance to the world economy, than intergovernmental commodity agreements or state monopolies. However, their annals are less complete. While governments have given publicity to some private cartel arrangements, either in approving or condemning them, businessmen have usually negotiated them in secrecy. Occasionally the arrangements have violated American antitrust statutes, and even when they have not, their members have been reluctant to divulge details.

Moreover, many private cartels are informal and amorphous. They are neither easily detected nor readily described. They rely in part on business proprieties and an abiding sense of mutual interest for their enforcement. They change in scope and effectiveness as a developing technology occasions changes in the power and influence of their participants. Patent exchange agreements whereby rival business concerns pool their technology and exchange their patent rights may fortify such arrangements, however, and give to them greater substance and sharper form.

On the other hand, many voluntary arrangements for controlling international markets have a definite structure and a formal administration. In rare instances a single corporate enterprise, perhaps

7. G. A. Roush (Ed.), *The Mineral Industry During 1939,* McGraw-Hill, New York, 1940, Vol. XLVIII, p. 405.

through entirely lawful means, may have acquired control of the principal sources of an industry's raw materials. In such circumstances, through corporate subsidiaries and affiliates it may determine output, administer prices, and regulate sales on world markets. In effect, such corporations may act as private planning agencies for the industries they control. An outstanding example is the International Nickel Company, Ltd.

Before World War II only Canada, New Caledonia, the Soviet Union, and Finland produced nickel in appreciable quantities. Aside from Soviet production, International Nickel with production centered in Canada accounted for about nine tenths of the world output. An International affiliate, Mond Nickel Company, Ltd., controlled the Petsamo mines in Finland. Mond Nickel had an arrangement with I. G. Farbenindustrie (IG) under which it supplied IG with nickel concentrates up to 10 per cent of world sales while IG agreed to buy nickel solely from Mond Nickel and to keep out of ore mining.[8] Whether or not International Nickel had a formal understanding with the French (New Caledonia) producers on prices and output is not clear, but with or without it International Nickel dominated world markets.[9]

### *Formal Cartels With a Corporate Structure*

In several instances, rival business concerns have centralized control of world markets through a corporation that acts as the cartel's administrative agency. For example, the 1931 aluminum cartel regulated world markets through Alliance Aluminium Compagnie, a Swiss corporation. Cartel members subscribed to its stock in proportion to their relative annual capacities. Alliance determined the total amount of aluminum to be produced quarterly and allocated it among the cartel members on a quota basis. It also fixed a minimum price and purchased metal from members who were unable to sell their quotas at that price or better. Although the Aluminum Company of America (Alcoa) was not itself a member of the cartel, it obtained protection—and assumed certain obligations—through the membership of Aluminium Limited, a Canadian company, originally

8. Ervin Hexner, *International Cartels,* University of North Carolina Press, Chapel Hill, 1945, pp. 234-35.

9. See Clair Wilcox, *Competition and Monopoly in American Industry,* TNEC Monograph No. 21, Washington, 1940, p. 79.

an Alcoa subsidiary and at all times subject to control by the same majority stockholders that controlled Alcoa.[10] In this manner the Alliance obtained in effect world-wide coverage.

*The Steel Cartel: A Complex of Agreements*

The international steel cartel illustrates a looser but more complex form of organization. Although control of steel was less highly concentrated, ultimately the cartel's coverage was as great as that of the aluminum alliance. Both cartels had the unofficial backing of the governments of the leading European exporting countries. The German and French Governments supervised negotiations leading to the first steel cartel in 1926, and its consummation was contingent on the conclusion of a commercial treaty. The British Government cooperated in bringing the British industry into the cartel, after its reorganization in 1933, by lending its tariff-making power as a bargaining weapon to the British Iron and Steel Federation.

The steel cartel was a sort of federation of seventeen specific commodity syndicates. These syndicates differed in structure, scope, and administration, but they all had some features in common and conducted similar activities. A typical one, the merchant-bar syndicate, fixed the share of each national group in total bar exports, centralized export sales in four national sales agencies, and defined their policies. The cartel's managerial committee, with a representative from each national group, and its *comptoir* committee, consisting of the directors of each of the commodity syndicates, determined general policies and coordinated the several selling syndicates. With the adherence of the leading American producers in the late thirties the cartel brought world steel markets under centralized control.[11]

*Patents and Processes Agreements*

Because cartel agreements may be contracts in restraint of trade within the meaning of the Sherman Act, American firms have been wary in joining them. Frequently American companies have been able to protect their domestic markets and share world markets on an agreed basis through an adaptation of the special privileges of

10. See *U.S.* v. *Aluminum Company of America, et al.*, 148 Fed. *2d* 416 (1945) at pp. 442-45. For a detailed account of the aluminum cartel, consult *Cartels in Action*, Chap. 6.

11. See *Cartels in Action*, Chap. 5.

patentees. Arrangements for the pooling or exchange of patent rights and technical knowledge are commonly called patents and processes agreements. In their simplest form a patentee may grant rival businesses exclusive rights in the use of a patent or process or in the sale of a patented product, each within a designated geographic area or industrial field, in exchange for similar rights in the licensor's territory. Each may agree to keep out of the territory of the other or to confine its operations to particular industrial fields, to limit output in accordance with an agreed formula or to sell at specified prices.

By such procedures producers may control and stabilize markets as effectively as through a formal cartel. How this may be done is illustrated by the arrangements covering the acrylic resin field among Röhm & Haas, an American firm with headquarters in Philadelphia; its former parent, a German firm of the same name with headquarters in Darmstadt; IG, the German chemical colossus; Imperial Chemical Industries, Ltd. (ICI), the British chemical combine; and du Pont. During the early thirties, Röhm & Haas of Germany after extensive research achieved a dominant position in the basic polymerization process in the methacrylate field. During the same period IG achieved dominance in the processing of acrylates. In 1934 each agreed to recognize the dominance of the other in its special field and to avoid competition. In the same year IG and Röhm & Haas (Philadelphia) through a cross-licensing agreement pooled their American and Canadian patents in the two fields.[12] The avowed purpose of the agreement was "to avoid . . . patent controversies . . . and to regulate the conditions of manufacture and sales" of products derived from the acrylates.

According to the Department of Justice, IG agreed to stay out of

12. The acrylates and methacrylates are resins composed of carbon, hydrogen, and oxygen. The acrylates are soft, sticky semiliquids; the methacrylates are harder, tougher, and less elastic.

The IG–Röhm & Haas (Philadelphia) agreement was one of the principal objects of an unsuccessful attack in an antitrust action by the Department of Justice. *U.S.* v. *Röhm & Haas, et al.*, Indictment returned August 10, 1942, in U.S. District Court for the District of New Jersey, Criminal Action No. 877-C. The *New York Times*, June 21, 1945, p. 1, reports the verdict. The arrangements all involved patent privileges, and doubtless their legal status benefited from this circumstance.

For a more complete account of these arrangements, see *Patents*, Committee on Patents, U.S. Senate, 77th Cong., 2d sess., Hearings pursuant to S. 2303 and S. 2491, Washington, 1942, Pt. II, pp. 663 ff. (These hearings will hereinafter be cited Bone, Pt. —, after the committee chairman.)

the plastic glass field in the United States, which was reserved for Röhm & Haas, and Röhm & Haas agreed to forego the manufacture of photographic articles, celluloid-like masses, dyestuffs, artificial rubber, pharmaceutical products, and abrasives.[13] IG made arrangements with other American corporations, most of them its affiliates or subsidiaries, for the use of its patents in making these products in this country. IG and Röhm & Haas also each agreed not to license any third party except with the other's consent. Meanwhile Röhm & Haas (Philadelphia) and Röhm & Haas (Darmstadt) had reached an agreement delimiting the areas of their respective operations in the acrylic field.

In 1936 IG obtained the consent of Röhm & Haas (Philadelphia) to license du Pont to use patents in making certain acrylic acid derivatives, with the understanding that du Pont would not use the technique for making cast sheetings. According to testimony before the Senate Committee on Patents "the actual effect of the agreement was that du Pont . . . remained out of the field of laminated glass using an intermediate of acrylate, and in a broader way stayed entirely out of the acrylates as differentiated from the methacrylates." [14]

When interference proceedings developed between Röhm & Haas and du Pont as a result of patent rights that du Pont obtained from ICI under their general patents and processes agreement, they settled the controversy in 1939 by a supplementary exchange of patent rights and delimitation of fields. As part of this settlement du Pont obtained the right to produce cast sheetings provided it would limit its output to one half that of Röhm & Haas.[15] Meanwhile Röhm & Haas of Darmstadt and ICI had divided world markets between them for the exploitation of their patents covering the manufacture of methyl-methacrylate cast sheetings.

A representative of the Department of Justice testifying before the Bone Committee summarized the significance of these several agreements as follows:

Thus, through a series of bipartite agreements, executed at different times, there was constructed an international cartel covering products in the acrylate field, the principal thread running through these agreements being the con-

13. The Röhm & Haas (Philadelphia)–IG agreement is reproduced as Exhibit 2 in Bone, Pt. II, pp. 749-55.
14. Bone, Pt. II, p. 688.
15. *Ibid.*, pp. 701-02.

spiracy pertaining to cast sheets of methylmethacrylate. The [antitrust] investigation developed the fact that though some of the conspirators never had direct dealings with one another, an overall division of territories was worked out, whereby Philadelphia [Röhm & Haas] kept out of the world markets and du Pont remained out of the British Empire except when given permission in special instances, and ICI, Darmstadt, and I. G. Farben remained out of the American market.[16]

These agreements also harmonized the operations of du Pont and Röhm & Haas in the American market. Although in the criminal antitrust suit against Röhm & Haas (Philadelphia), du Pont, and others the defendants were acquitted of legal wrongdoing, the economic effect of the various arrangements was apparently to hinder the development of competition in the methyl-methacrylate field. Through patent agreements producers were able to divide markets and delimit fields of operation, as they could not legally have done without benefit of patent franchises.

*Cartels May Combine Several Control Devices*

Rarely have cartel members relied on a single device. The more important cartels have generally combined a variety of techniques for centralizing control and restricting competition. When American firms have taken part in international cartels they have sometimes bulwarked a formal cartel structure by a series of patent exchange agreements, the scope and terms of which have coincided with or paralleled those of the formal cartel. Frequently, too, the dominant firms in the leading world markets have established a community of interests through purchase or exchange of stock, formation of jointly owned subsidiaries, or similar methods of financial interpenetration.

The incandescent electric lamp cartel, established in December 1924, illustrates the use of these devices. This cartel had a formal structure, with control centered in a Swiss corporation, Phoebus S. A. Compagnie Industrielle pour la Développement de l'Éclairage. Cartel members held Phoebus stock in the proportions of their relative lamp sales during a specified base period. A general assembly and an administrative board ran the cartel. The cartel's major functions were the exchange of patents and technical information among cartel members and the division of markets.

16. *Ibid.*, p. 698.

The cartel divided world markets into three groups: home territories, British overseas territories, and common territory. Home markets were reserved primarily for domestic producers; other markets were allocated among the cartel members on a quota basis. Cartel members who oversold their quotas paid fines which Phoebus distributed among those who undersold theirs. A Board of Arbitration settled disputes among members over conflicting patent claims, royalty payments, and the like.

The cartel membership included the leading producers of incandescent lamps in all of the major industrial countries except the United States. However, General Electric's wholly owned subsidiary, International General Electric of New York, Ltd., was a member of the cartel, and an official of International General Electric Company, Inc. (another General Electric subsidiary) who had played a leading role in setting it up became its chief executive officer. Moreover, through a series of patent exchange agreements between International, Inc., and cartel members General Electric's domestic market was protected from their competition.[17] International Limited's membership in the cartel assured General Electric's cooperation in the exploitation of foreign markets. Restrictive clauses in General Electric's patent-licensing agreements with domestic producers, prohibiting or limiting their exports, insured foreign cartel members that these American licenses would not disturb foreign markets.

General Electric strengthened its connections with the cartel by purchasing substantial stockholdings in the leading cartel members. By 1929 General Electric owned about 29 per cent of the outstanding stock of Osram, the dominant German lamp producer and the leading exporter; 17 per cent of Philips, which controlled the Dutch market and played an important role in world markets; 44 per cent of the leading French producer, Compagnie des Lampes; 10 per cent of Tungsram of Hungary; 46 per cent of (British) Associated

17. See, for example, Ex. 39-G, Art. III, in *U.S.* v. *General Electric Co., et al.*, Civil Action No. 1364, Complaint filed January 27, 1941, in U.S. District Court for the District of New Jersey. Trial of this case started in the spring of 1943, was suspended after a few weeks for the duration of the war, was resumed in March 1946, and concluded with oral arguments early in 1947. Up to June 1, 1947, the court had not handed down its decision.

See also *Cartels in Action*, Chap. 8, and source materials cited in footnote 99 on p. 339 of that chapter.

Electrical Industries, Ltd.; 34 per cent of (British) General Electric, Ltd.; and 40 per cent of Tokyo Electric Company.

By such means the world's principal lamp manufacturers substituted privately administered centralized controls for the forces of the market in determining who should produce lamps, what quality and quantity of lamps they should produce, and, indirectly, at what prices they should sell them.

### *The Chemical Synthesis*

Chemicals illustrate the wide variety of devices and the amorphous character of cartel controls producers have used to stabilize an industry. No single cartel encompasses the industry's sprawling operations and yet chemical markets have attained a noteworthy stability. As *Fortune* expressed it:

> . . . the chemical industry . . . was practicing "cooperation" long before General Johnson invented it in 1933. It has seldom been bedeviled by overproduction, has had no private depressions of its own, and has not often involved itself in long or bloody price wars . . . Its gentlemanly instincts are all against pushing and crowding . . . The industry . . . is . . . the practitioner of one definite sort of planned economy . . .[18]

This achievement is the more remarkable since the industry is young and vigorous. Its technology continually erases old boundaries and opens new areas of potential conflict. Four major factors explain its success in overriding such powerful forces making for instability: (1) the dominant position in the more important national markets of a few gigantic chemical companies, each the product of vertical integration, horizontal combination, and circular expansion;[19] (2) the establishment of a community of interests among these leading chemical companies through exchange of patents and technical data or through commercial alliances; (3) the cementing of these friendly relations with formal cartel arrangements, in some spheres; and (4) the cultivation of business etiquette

18. "Chemical Industry: I," *Fortune*, December 1937, pp. 157, 162.

19. Vertical integration means linking technically successive processes under a single management. Horizontal combination means bringing together under unified control—whether or not by a single management—two or more enterprises producing goods of the same kind. By circular expansion we mean the addition of cognate lines of products to those already being made by a firm; the techniques may or may not be similar, the products may or may not be complementary.

and business diplomacy to safeguard vested interests and amicably resolve borderline conflicts.

By reason of the scope and the size of its manufacturing operations, its research activities, its patent holdings, and its community of interests with other leading chemical companies, du Pont has become the major influence in American chemical industries. Ranking close to du Pont in the general scope of their operations and surpassing it in certain fields are Union Carbide & Carbon, Allied Chemical & Dye, and American Cyanamid. In 1939, forty American chemical companies had assets of $2,060,000,000. Du Pont, Union Carbide, and Allied Chemical & Dye alone accounted for nearly two thirds of this total. American Cyanamid, General Aniline & Film, Monsanto, Hercules, Air Reduction, and Dow accounted for 16 per cent more.[20]

The Temporary National Economic Committee has given figures on the extent of concentration in chemical production:

> Among 200 chemical raw materials manufactured by some 600 companies . . . in 1939, there were 35 with 5 producers, 21 with 4, 11 with 3, and 7 with only 2; thus 74, more than one-third of those in the group, were made by less than 6 concerns. Among 75 chemicals included in the Bureau of Foreign and Domestic Commerce study of concentration of output in 1937, there were 11 where the 4 leading firms produced between 40 and 70 per cent, 17 where they produced between 70 and 100 per cent, and 10, including products as important as synthetic methyl alcohol and calcium carbide, where they produced 100 per cent.[21]

Concentration of control in the chemical field had gone even further in the leading European countries than in America. The outstanding leader on the continent was the German colossus, IG. In the entire history of modern industry probably no other private corporation has achieved so dominant a position or exerted so great a power over so broad an industrial area. Data released by the Allied Military Government after Germany's defeat reflect the extent of its dominance. In 1943 IG produced 100 per cent of Germany's synthetic rubber, methanol, and lubricating oils; 95 per cent of its poisonous gases and nickel; 92 per cent of its plasticizers; 90 per cent of its organic intermediates; 90 per cent of its plastics;

20. See *Cartels in Action,* p. 381.
21. Wilcox, *op. cit.,* p. 201.

88 per cent of its magnesium; 84 per cent of its explosives; 75 per cent of its nitrogen and commercial solvents; 70 per cent of its gunpowder; 61 per cent of its calcium carbide; 53 per cent of its synthetic resins; 46 per cent of its chlorines and high-octane gasoline; 45 per cent of its compressed gases; 35 per cent of its sulphuric acid; 33 per cent of its synthetic gasoline; 28 per cent of its spun rayon; 24 per cent of its artificial silk; and 8 per cent of its aluminum.[22] As Europe's largest industrial corporation and the world's largest chemical company, IG established a community of interests with numerous foreign chemical companies. It extended its influence and power by setting up many subsidiaries abroad and through hundreds of cartel arrangements which encircled the globe.

*The British Chemical Combine*

Second only to IG in its influence on world markets, and with a comparable dominance in its domestic markets was ICI, the British chemical combine. Organized primarily as an instrument of commercial power, ICI was the avowed apostle, under Sir Alfred Mond's leadership, of a "new industrial order." Its program of market stabilization extended far beyond the limits of the British Empire. Dominant positions were attained in France by Kuhlmann, in Italy by Montecatini, in Belgium by Union Chimique and Solvay et Cie., in Czechoslovakia by Aussiger Verein, and in Japan by Mitsui. Such centralized control in the leading domestic markets paved the way for collaboration in world markets.

In numerous instances market collaboration found expression in formal cartel arrangements restricting output, allocating quotas, dividing markets, or fixing prices. During the interval between World Wars I and II at one time or another formal cartels regulated the sale in world markets of acetic acid, citric acid, alkalies, calcium carbide, dyestuffs, nitrates, explosives, titanium pigments, chloride of lime, magnesium sulphate, superphosphates, cyanides, tanning extracts, many pharmaceuticals, and numerous other products.[23]

But more important than formal cartel arrangements in eliminating competition in world chemical markets was the community

22. *New York Times*, October 21, 1945, pp. 1, 12. In a few instances the data refer to other years than 1943, when information for that year was not available.

23. See *Cartels in Action*, Chaps. 9, 10, 11; the Bureau of Foreign and Domestic Commerce's annual world chemical surveys; and Hexner, *op. cit.*, Pt. II.

of interests formed among leading chemical companies through their numerous patents and processes agreements and commercial alliances. Of these, the "Grand Alliance" between du Pont and ICI is the most thoroughgoing and comprehensive. Their 1929 Patents and Processes Agreement laid down the basic pattern of their quasi-partnership relation. This agreement covered substantially all the chemical products both companies then produced. Among the products subject to its terms were nonmilitary explosives, cellulose derivatives (plastics, film, and lacquers), paints and varnishes, pigments and colors, acids, fertilizers, synthetic ammonia, dyestuffs and other organic chemicals, alcohols, insecticides, fungicides, and disinfectants.[24]

The companies agreed to exchange technical information and to grant to each other exclusive licenses to make, use, and sell in designated areas under all their patents and secret inventions, present and future, in so far as this did not conflict with prior commitments to others. Du Pont received exclusive rights for North America, except Canada, and ICI for the British Empire, with the same exception. For the rest of the world, again excluding Canada, they agreed to exchange nonexclusive licenses. Each agreed to license no other company in nonexclusive territory without first informing the other.

Although du Pont and ICI amended this agreement in 1934 to permit each to sell within the other's exclusive territory products embodying solely its own inventions, its practical effect has been to eliminate competition between them throughout the world.[25] In numerous foreign markets they have abandoned all pretense of competition by operating through jointly owned subsidiaries. In Argentina, Uruguay, and Paraguay, it is Duperial Argentina; in Brazil, Duperial Brazil; in Canada, Canadian Industries, Ltd. By thus joining forces they have eliminated competition between themselves.

24. Exhibit 1 in the Complaint filed January 6, 1944 in the antitrust suit *U.S.* v. *Imperial Chemical Industries, Ltd., et al.*, in U.S. District Court for the Southern District of New York, Civil Action No. 24-13, reproduces the 1929 agreement. On January 11, 1945, this case was removed from the court calendar for the duration of the war. No further action has taken place since then.

25. The government contends in its complaint in *U.S.* v. *ICI*, cited above, that this is purely a formal change designed to validate the agreement under the American antitrust statutes. For a more detailed discussion of the arrangement and the issues which it raises, see *Cartels in Action*, Chap. 10. When the 1929 agreement expired in 1939, du Pont and ICI replaced it with a similar contract, broadened to include many new products—notably certain chlorine products, antiknock compounds, synthetic resins and plastics, pharmaceuticals, synthetic rubber (Neoprene), and nylon.

Moreover, they have stabilized these local and regional markets through common action with other chemical companies in specific-product cartels.[26]

### *IG's International Affiliations*

Not approaching so close to genuine partnership, but more insidious and generally more dramatic were the arrangements by which IG harmonized its relations with foreign chemical companies. Equipped with superior technical resources and having a head start over other producers, IG was unwilling fully to merge its interests with those of any other leading chemical company. Instead it developed a series of limited arrangements with separate companies covering particular segments of the chemical field. In this way it succeeded in integrating the operations of many companies into a broad although not always clearly defined cartel pattern, under which it enjoyed specific advantages in export markets and even shared in the exploitation of the domestic markets of many of its collaborators. It met the stiffest opposition to this strategy in the United States, where it encountered the American antitrust laws and had to overcome the handicap of temporary exclusion from the market during and following World War I.

Bent on dominating world chemical markets, IG's first task was to regain its American foothold. By the late twenties it had reassembled the more vital parts of the chemical organization its constituent companies had built up before 1914. Simultaneously it negotiated a series of agreements designed to insure the development of new products and processes on a noncompetitive basis, to extend its interests and influence over the whole field of chemicals, and to fortify its position in world markets.

It achieved its most signal success in its "marriage" to the Standard Oil Company of New Jersey.[27] It not only won an attractive bride, but got a substantial dowry—546,000 shares of Standard stock valued at more than $30 million. The Standard-IG agreements of 1929 were basically mutual commitments not to compete in either the petroleum or the chemical fields. They recognized IG's primacy in chemicals, Standard's primacy in petroleum. The parties agreed

26. See *Cartels in Action*, Chap. 10.
27. This is IG's own characterization of its 1929 contracts with Standard Oil.

to develop overlapping fields jointly. In chemical developments closely related to the production of the ordinary products of oil refining, such as motor fuel and lubricants, Standard was to have a controlling interest. In new chemical processes not based on oil as a starting material or leading to products similar to those of the oil industry, IG was to have a controlling interest.[28] In making the agreements Standard's primary objective apparently was to protect its dominant position in the oil industry by obtaining control of IG's hydrogenation patents and future technical contributions in that field. IG's primary goal was to obtain a secure foothold in the new and promising chemical field based on liquid hydrocarbons and to extend its power over the chemical industries. Both achieved their aims, in large measure.

*The IG–du Pont Entente Cordiale*

Later IG made a gentlemen's agreement with du Pont and worked out arrangements for limited cooperation on specific products or processes with numerous other American chemical companies. A du Pont official has described the du Pont–IG relationship as follows:

> The I.G. and du Pont have an informal agreement that when we have German patents which seem to us might be profitably exploited in Germany, and when these patents cover subjects on which we have no prior commitments or moral obligations to discuss with anybody else, we will bring them first to the attention of the I.G. and they will do the same for the United States.[29]

Under their general accord, IG and du Pont reached specific agreements for the cooperative development of several new products and processes through exchange of patent rights and techniques. For example, in 1938 IG obtained German rights to du Pont's process for transforming acetylene into monovinylacetylene, a source of butadiene for making Buna rubber, and in 1939 the German rights to nylon. Du Pont also apparently recognized the prior rights of IG's American subsidiary, Unyte Corporation, in the field of urea

28. For the basic agreements between IG and Standard Oil, see *Investigation of the National Defense Program,* Special Committee Investigating the National Defense Program, U.S. Senate, 77th Cong., 1st sess., Hearings pursuant to S.Res. 71, Pt. XI, Exs. 360, 362, 363, 367, pp. 4561-584. On the meaning of the IG-Standard agreements, see *Cartels in Action,* Chaps. 3, 11.

29. Bone, Pt. V, p. 2265.

formaldehyde resins and confined its operations to supplying raw materials for their manufacture. On the other hand, in 1938 du Pont obtained American rights to IG's techniques relating to polystyrene plastics and in 1940 reached a settlement in principle on the rights to vinylchloride polymers.[30]

Moreover, IG in its dealings with Standard Oil recognized du Pont's prior position in the field of high-priced synthetic rubbers. In truth, throughout its relations with Standard it gave continual evidence of its cartel obligations to numerous other American chemical companies and in general played the role of market stabilizer. Specifically, it forced Jasco, IG-Standard's jointly owned development company, to suspend its acetic acid project at Baton Rouge because of IG's commitment to Union Carbide & Carbon. It prevented Jasco from producing butyl alcohol lest it disturb IG's friendly relations with Union Carbide and Commercial Solvents. It blocked Jasco's production of: (1) acetaldehyde, because, as an IG representative expressed it, "we do not want to disturb the market"; (2) vinylchloride or its raw materials, to reserve this plastic as a bargaining counter for du Pont's Neoprene; (3) acetylene for sale to Röhm & Haas for making cyanides, in deference to du Pont and American Cyanamid; and (4) acetic anhydride because "U.C.C. . . . would probably regard it as very disagreeable."[31]

In bargaining for position in the American markets, IG generally played off one American chemical company against another. It exercised the power it won to stabilize markets and to insure the noncompetitive exploitation of new products and processes. In part because of our antitrust laws, in its dealings with American chemical companies IG relied largely on patent exchange agreements rather than formal cartels. In dealing with foreign chemical companies it resorted more frequently to simple cartel techniques. Through their cooperation in international cartels before World War II, IG and ICI had eliminated competition between themselves, and in large

30. The agreements covering the several products and processes mentioned are listed in Schedule A of the 1939 du Pont–ICI Patents and Processes Agreement. See *U.S.* v. *ICI*, Complaint, cited above. See also Corwin D. Edwards, *Economic and Political Aspects of International Cartels*, Monograph No. 1 of the Subcommittee on War Mobilization, Committee on Military Affairs, U.S. Senate, pursuant to S.Res. 107, 78th Cong., 2d sess., Washington, 1944, p. 63; and Bone, Pt. II, pp. 819-22, 826-28.

31. Bone, Pt. III, pp. 1497, 1505; see also pp. 1392-402 and exhibits; and *Cartels in Action*, Chap. 11.

sectors of the world market stifled competition altogether, as in the sale of nitrogen and nitrogenous fertilizers, alkalies, explosives, dyestuffs, sodium cyanide, and numerous other products. Moreover, according to an AMG report, in 1943 IG held stock interests in 173 foreign corporations, had piled up total assets of 6 billion Reichsmarks and "operated, with varying degrees of power, in more than 2000 cartels." [32]

### *Conference Table Modifies Market Forces*

But perhaps more important than any formal device in stabilizing international chemical markets has been the recognition by big chemical companies of the importance of adjusting rival interests through peaceful negotiation rather than competitive conflict. As giant corporations with tremendous assets at stake, they have chosen the security of the conference table in preference to the risks of competitive markets. In doing so they have developed strategies and techniques comparable to those practiced in diplomatic exchanges among sovereign states. The leaders have respected each other's dominion in particular geographic areas or industrial fields. They have mutually recognized spheres of influence, prior claims, vested rights. They have made formal alliances and resisted attempts to upset the applecart.

They have not renounced business rivalry, any more than national states have abandoned political rivalries. Each has known what he wanted and has been determined to get it. To win a market or monopolize a field they have used all the tactical weapons at hand. Patents, secret processes, know-how, these have been counters in a never-ending game with world markets the stakes. Each company must be prepared for a showdown, because a policy of appeasement may prove too costly. But trial by battle has been a last resort. The British Committee on Trusts, speaking specifically on the dye business, neatly described the relations among the leading chemical companies:

> We are . . . impressed . . . with the degree to which international competition in dyes . . . is a conflict of commercial "Great Powers" exhibiting all the characteristics of militant diplomacy carried on with financial and com-

32. *New York Times*, October 21, 1945, pp. 1, 12 (Section 1). See also *Bulletin* (Department of State), May 11, 1947, p. 916.

mercial brute force in the background, rather than a simple economic matter of striving to offer, in competition with others, the most acceptable article at the most favorable price . . .[33]

Business rivalry in chemicals is not dead. But it has changed greatly in character. It bears little resemblance to the ideal competition of nineteenth-century economic theory, with many rival sellers facing numerous buyers who ultimately pay an equilibrium price determined by the forces of demand and supply in a free market. Nor is it on all fours with the imperfect competition of twentieth-century price theory in which the number of sellers is so small and the scale of their operations so large that each, behaving rationally and independently, follows policies that stabilize the market. Business rivalry in chemicals expresses itself in a collective bargaining process. It has developed diplomacy as a technique for settling differences—a constant process of adjusting conflicting interests and achieving market stability. As Sir Alfred Mond stated it:

> The old idea of the heads of great businesses meeting each other with scowls and shaking each other's fists in each other's faces and engaging to destroy each other's business may be very good on the films, but it does not accord with any given facts. The alliance of great companies operating on huge scales with every kind of interest and working in harmonious cooperation renders it possible to have exchange of information as regards methods of business and new ideas, and we all do better by working in that manner . . .[34]

## *Scope of the Cartel Movement*

Through cartel arrangements, formal or informal, through patent exchange agreements, through intercompany alliances, and through the development of business diplomacy for harmonizing conflicting interests, business leaders have done much to mitigate or eliminate competition in international markets. They have been more successful in some fields than in others. Cartelization has gone furthest in the mineral raw materials industries. Between the wars, cartel schemes at one time or another regulated the production, or the distribution in international markets, of bauxite, bismuth, borax, cobalt, copper, diamonds, lead, manganese, magnesium, mercury, molybde-

33. *Report on Dyes and Dyestuffs*, Sub-Committee appointed by the Standing Committee on Trusts, Parliamentary Report, Cmd. 1370, London, 1921, p. 20.
34. Imperial Chemical Industries, Ltd., *Proceedings* at the First Annual General Meeting, May 31, 1928, p. 7.

num, nickel, nitrate of soda, petroleum, phosphate rock, platinum, potash, sodium sulphate, sulphur, tin, and zinc.

The cartel movement did not stop, however, with the control of raw materials. It came to include a wide range of staple commodities or semifinished products that feed industrial plants making consumer goods. Among these are heavy chemicals, such as alkalies and acids for the paper and glass industries; pigments for paints; dyes for textile manufacture; lenses for spectacles, cameras, and scientific instruments; vegetable oils for soap, paint, and food; bearings for machinery; and artificial leather for automobiles and furniture. Moreover, the movement also embraced many finished commodities sold directly to the final consumer—matches, thread, electric lamps, gasoline, photographic equipment, radio apparatus, dressed beef, rayon, business machines, motion picture apparatus, and a wide variety of pharmaceuticals.

Cartels have also arisen in the public utility field. In ocean transportation, shipping conferences have customarily fixed rates and schedules between principal ports. For many years cartel agreements have regulated telephone and telegraph communication; and since the birth of the industry, international air transport operators have jointly agreed on rates. Cartels have long operated in the field of insurance, where rate bureaus classify and standardize risks and reinsurance agreements link the big companies. In investment banking, international syndicates for marketing government and even corporate securities have been common.

In truth, cartels have reached into practically every branch of the modern economy. Only inherently local economic activities have escaped cartel influence—the provision of professional services, personal services, and retail distribution services, and the sale of perishable products, like fluid milk and ice cream, and of bulky products with low unit value, like sand and gravel.

### *Influence of Cartels on the American Economy*

Though no one can measure precisely the economic effect of any specific international cartel, and much less the effects of the entire movement, it is possible to indicate the scope of the movement in relation to the whole American economy before World War II. Briefly, the method is to compare for each of the three major com-

modity groups (agricultural, mineral, and manufactures) the total value of the cartelizable products sold in the United States in a given year with the value of that part of them for which governments or voluntary producer groups had instituted cartel controls.[35]

Such a comparison shows that in 1939, 86.9 per cent by value of mineral products, 47.4 per cent of agricultural products, and 42.7 per cent of manufactured products came to market under cartel regulation. (See Table 1.)

TABLE 1

PROPORTIONS OF AGRICULTURAL, MINERAL, AND MANUFACTURED PRODUCTS SOLD IN THE UNITED STATES IN 1939 THAT WERE CARTELIZED[a]

*(In Millions of Dollars)*

| | | | | |
|---|---|---|---|---|
| *Agricultural products* | | | | |
| Aggregate domestic production | 6,390.4 | | | |
| Plus aggregate imports | 1,224.0 | | | |
| Total supply | 7,614.4 | | | |
| Minus aggregate exports | 624.2 | | | |
| Net aggregate domestic sales | | | 6,990.2 | |
| Cartelized domestic production | | 2,587.3 | | |
| Plus cartelized imports | | 884.2 | | |
| Total cartelized supply | | 3,471.5 | | |
| Minus cartelized exports | | 157.2 | | |
| Net cartelized domestic sales | | | 3,314.3 | |
| Proportion cartelized (3,314÷6,990) | | | | 47.4% |
| *Mineral products* | | | | |
| Aggregate domestic production | 3,695.0 | | | |
| Plus aggregate imports | 407.9 | | | |
| Total supply | 4,102.9 | | | |
| Minus aggregate exports | 385.3 | | | |
| Net aggregate domestic sales | | | 3,717.6 | |
| Cartelized domestic production | | 3,291.8 | | |
| Plus cartelized imports | | 303.0 | | |
| Total cartelized supply | | 3,594.8 | | |
| Minus cartelized exports | | 361.8 | | |
| Net cartelized domestic sales | | | 3,233.0 | |
| Proportion cartelized | | | | 86.9% |

35. For a detailed discussion of the methods followed in making these calculations, their limitations, and the significance of the conclusions, see Appendix.

TABLE 1 (*continued*)

| | | | | |
|---|---|---|---|---|
| *Manufactured products* | | | | |
| Aggregate domestic production | 46,533.3 | | | |
| Plus aggregate imports | 819.1 | | | |
| Total supply | 47,352.4 | | | |
| Minus aggregate exports | 2,197.4 | | | |
| Net aggregate domestic sales | | | 45,155.0 | |
| Cartelized domestic production | | 20,255.5 | | |
| Plus cartelized imports | | 475.6 | | |
| Total cartelized supply | | 20,731.1 | | |
| Minus cartelized exports | | 1,435.9 | | |
| Net cartelized domestic sales | | | 19,295.2 | |
| Proportion cartelized | | | | 42.7% |

*Sources:* For sources of data see notes to Appendix Tables A-F.
a. Excludes commodities in each major division that are not susceptible to cartelization, either because of their perishable nature (*e.g.*, fresh milk) or because their great bulk and low value practically rule out the possibility of international trade (*e.g.*, sand and gravel). Includes all those commodities sold under cartel arrangements at some time during the thirties, if those arrangements either covered the U.S. market directly or were broad enough to have a substantial effect, indirectly, on American imports or exports.

The significance of such comparisons may easily be exaggerated, of course. Cartels differ greatly in form, effectiveness, and duration. Many control experiments have been short-lived. Others, though lasting longer, have exerted little influence on prices. Some have represented more the expression of a hope than the achievement of a goal. Besides structural weaknesses, three factors tend continually to limit the influence of cartels: (1) internal defection, (2) outside competition, and (3) technological displacement.

*Disaffection and Backsliding*

Except in the few cases where a single corporate enterprise or a closely knit corporate group has achieved market control, disaffection among cartel members may wreck a control scheme, or greatly limit its effectiveness. The more severely a cartel restricts output, the greater the inducement for any particular member to renounce his commitments openly or violate them secretly. The temptation for members to ignore their cartel commitments is especially strong in periods of contracting demand. The Great Depression wrecked many cartels, including early ones in steel, nitrogen, and sugar, and greatly weakened others or forced their reorganization.

### *Outside Competition*

A cartel's coverage of production is rarely complete. Moreover, if a cartel succeeds in raising prices, newcomers are likely to flock into the field. The successive Brazilian coffee valorization schemes promoted steady expansion in the areas of coffee culture. The first copper cartel spurred the development of new sources of supply in Africa and Canada. Duperial's restrictive policy in Argentina stimulated local competitive production of sulphuric acid and cellophane.[36]

Despite the strength of the aluminum cartel, it was forced to adjust its policies from time to time to meet the challenge of outsiders bent on gaining a foothold in a profitable industry. In the first decade of this century half a dozen competitors sprang up in France, though none remained competitive for long. The Japanese Government after World War I determined to free itself from the cartel's exactions and by the late thirties had become virtually independent of European and American sources of supply. In the United States, after the outbreak of World War II, the Reynolds Metals Company, with the assistance of government funds, undertook to develop an integrated aluminum enterprise and it has thus far kept itself free from cartel control. The restrictive policies of the German and French potash cartel encouraged the development of a potash industry in the United States, although the cartel finally prevailed on the interlopers to follow its policies.[37] But the tendency of cartels to disregard potential competition has often led to their undoing.

### *Obsolescence Through Technological Advance*

Frequently a cartel's restrictive policy has encouraged the development of substitutes. The quinine cartel, by raising the cost of fighting malaria, indirectly stimulated research that led to the discovery of atabrine and other quinine substitutes. Unfortunately for malaria sufferers, however, the chemical companies patented the new remedies and, through restrictive cross-licensing, retained monopoly

36. However, the cartel brought the new enterprises under control. See *Cartels in Action*, Chap. 10.

37. See *U.S.* v. *American Potash & Chemical Corp., et al.*, Civil Action No. 8-498, Complaint filed May 15, 1940, in U.S. District Court for the Southern District of New York, and Consent Decree entered on May 21, 1940. Cited in *Cartels and National Security*, Report No. 4 from the Committee on Military Affairs, U.S. Senate, pursuant to S.Res. 107, 78th Cong., 2d sess., Washington, 1944, Pt. II, p. 45.

control over them. Rayon made serious inroads into the market for Japanese silk, and it might have encroached still further if its sale had not been cartelized.[38] Similarly, the introduction of nylon is curtailing the growth of rayon manufacture and doubtless would do so to an even greater extent were it not for du Pont's monopoly of nylon production. Fibreglass, sponge plastics, and rock wool have curtailed the market for older insulating materials, thus limiting the effectiveness of asbestos cartel controls. Tungsten carbide, despite its fantastic price under cartel control, has cut into the demand for industrial diamonds, which are also cartelized. Notwithstanding cartel restrictions on output, plastics have made their way into the market, in part at the expense of the sheet glass cartel. Moreover, leading members of the original nitrocellulose plastics cartel could not rest on their oars. Du Pont, ICI, IG, and the French *comptoir* had to, and did, steadily extend their influence over the development of newer plastics, notably the vinyl, methacrylate, and urea compounds.[39]

With the development of television, members of the electronics cartel faced the prospect of a reduction of earnings in radio and motion pictures. They held an extensive and highly profitable stake in the production of radiobroadcasting apparatus and sound-recording equipment.[40] As an anchor to windward, they acquired a strategic technical position in television.

Structural weakness, defection of cartel members, entrance of new producers, or technological displacement may greatly limit the effectiveness of cartel control. In a dynamic society, continued control of the market through collusive action is difficult. Many cartel agreements explicitly recognize this fact. A provision of the 1938 nitrogen cartel agreement authorized the DEN group (German, English, and Norwegian members) to dissolve the cartel, at their discretion, whenever "unregulated" exports reached 10,000 tons a year—less than 5

38. See *In the Matter of Viscose Co., et al.,* 25 F.T.C. Doc. 421 (1937). For other sources of information on the rayon cartel, see *Cartels in Action,* n. 131, p. 513.
39. See *Cartels in Action,* Chaps. 10, 11.
40. See N. R. Danelian, *A. T. & T.,* Vanguard, New York, 1939; Frank Waldrop and Joseph Borkin, *Television: A Struggle for Power,* Morrow, New York, 1938; and *Scientific and Technical Mobilization,* Subcommittee of the Committee on Military Affairs, U.S. Senate, 78th Cong., 1st sess., Hearings pursuant to S. 702 and S.Res. 107, Washington, 1943, Pt. IV, pp. 406-09.

per cent of normal world exports. This provision reflected the cartel's precarious hold on the market. Similarly, though the market control of the Tin Producers' Committee was far less vulnerable, the International Tin Agreement sanctioned the withdrawal of any member when exports not subject to cartel regulation amounted in any year to 15 per cent of total exports.

In spite of the vulnerability of cartels, apparently many of them manage to survive. But the finding that, for example, approximately 87 per cent of the mineral products sold in the United States in 1939 were the subject of international cartel arrangements broad enough to have affected the supply of such goods in domestic markets does not measure the effect of minerals cartels on the American economy, regardless of whether the United States or American producers (if any) were represented in such cartels. In some instances the American market was insulated from the effect of foreign controls by tariff barriers. Behind these barriers domestic producers may have competed among themselves. Moreover, many cartels were short-lived or relatively ineffective. Some were defensive arrangements, organized in industries of chronic surplus capacity to avoid the losses caused by unrestrained competitive readjustment. Governments openly sanctioned some of them and gave implicit approval to many others. On the other hand, many were aggressive organizations designed not primarily to avoid competitive losses but to insure monopoly earnings.

However, the findings do indicate something of the broad scope of the cartel movement. They show, at least, that the influence of international cartels on this country's economy has been pervasive. Restrictive market-regulating efforts that have permeated so broad and important an area of the American economy could hardly fail to affect such vital aspects of the economic process as standards of living, business stability, technological progress, and national income. For the existence of a cartel is itself an indication of some monopolistic power, actual or potential. Producers do not form cartels for fun. They join cartels to advance their private business interests. Unless a cartel has a prospect of increasing profits by getting enough producers to make their policies conform to the collective will of the industry, it will attract—and hold—few business-

men. When a cartel becomes altogether impotent, it loses its reason for existence. It dissolves. The broad scope of the cartel movement suggests, therefore, that these arrangements had a significant influence on the way the American economy operated in the decade before World War II.

## Chapter 4

# ECONOMIC CONSEQUENCES OF CARTELS

WHAT ARE the economic consequences of cartels? The question as frequently asked invites an answer in simple terms of "good" or "bad." So simple a judgment on so complex an issue can only provoke argument. The question itself requires clear definition of the kinds of consequences to be studied.

The line of inquiry undertaken in the present chapter is to determine the immediate practical outcome of cartel arrangements—how they affect capacity, output, productive efficiency, and prices in the industries directly concerned. This approach alone, however, is inadequate to show the net economic effects of cartels. To that end study must be made of the effect of cartels on the way the economic system as a whole functions: the system's regularity of operation, its dynamic qualities or capacity for growth, its pattern of income distribution, its ability to satisfy the socially approved aspirations for economic opportunity and security of all elements in a democratic society. These are among the most important of the economic consequences of cartels. But appraisal of cartels calls also for consideration of their indirect economic consequences, notably their impact on political organization, civic health, and national security. The analysis in this chapter deals only with the direct results of cartels on the industries in which they operate.

### *What Cartels Do and Don't Do*

Characteristically, cartels attempt to modify the terms of sale or readjust the relationship of supply and demand in particular industries to the advantage of established enterprises. Promoters and managers of cartels have in some cases, no doubt, considered the interests of employees, particularly in government schemes regulat-

ing supply in periodically or chronically depressed industries such as sugar, coffee, and Chilean nitrates. But improvement of conditions of employment has not been the primary objective. Indeed, no cartel agreement known to the authors has contained a single provision expressly designed to benefit wage earners by regularizing employment, expanding payrolls, or sharing the profits from higher prices. Whatever advantages to employees may flow from a cartel scheme are indirect, such as might trickle down from larger profits.

Neither are cartels organized primarily to serve consumers. Whether or not cartels jeopardize consumer interests is a valid question. Indisputably, however, any possible benefits to consumers are indirect and incidental. Even when a cartel grants membership to representatives of consumers, as in sugar, it is little more than a gesture to placate those who obviously have much to lose and little to gain from market regulation.

### *Methods of Cartels*

Cartels in seeking to increase the profits of their members or to minimize risks in particular industries have limited courses of action available to them. Business profits always and everywhere consist of the difference between costs incurred and revenues realized.[1] Hence, basically, only two ways of increasing profits are possible: by reducing costs or by increasing revenues, though the two procedures may be combined. Revenues may be increased either by enlarging output (and sales) or by raising prices. But cartels are not particularly renowned for the encouragement they offer or the pressure they exert to expand output.

Usually, the whole community shares in the benefits when an industry or enterprise increases its profits by reducing real costs.[2] Con-

1. Whether this differential should be computed on a unit-product basis or in terms of gross expenditures and gross revenue per unit of time depends on the particular managerial problem or economic issue under consideration. If one assumes a given operating rate as a fixed datum, the profit margin per unit-product may be the more significant ratio. But as a lower margin of profit on a larger volume of output, sold at lower prices, may sometimes lead to higher net profits for the enterprise in a given accounting period, the unit-product basis of computation alone is an untrustworthy measure of profitability.

2. An industry or an enterprise may reduce its costs per unit of output by using less of some productive factor (for example labor) without increasing the employment of other factors, or at any rate without increasing them enough to compensate for the reduction in cost, and if this reduction in cost is passed on to consumers, whether under the pressure of competition or otherwise, the gain in efficiency will yield a net advantage all around. For either the consumers can buy more of the cost-

versely, when it increases its profits simply by pushing up prices, the gains to the business interests are usually, though not invariably, at the expense of the rest of the community.

*Cost Reduction Not Always Socially Expedient*

These broad generalizations are subject to exceptions. An enterprise may reduce its total unit cost by paying less for one or more of the productive factors. For example, it may reduce wage rates while trying to maintain the same or a higher rate of output; and it may pass on the reduction of cost as lower prices to consumers. Such a reduction of cost may be economical or wasteful, depending on how the lower remuneration affects employment.

If the lower wage rates do not lead to a withdrawal of some labor into idleness or less remunerative employment, and if they have no adverse effect on the efficiency of labor, then the reduction of cost would indicate that the previous wage rates were higher than necessary to obtain labor's cooperation in the productive process.

In the so-called "sweated" trades, where wage-paring was once common, such methods of reducing cost have quite other than salutary effects. These include a tendency to push some part of the labor force into idleness, perhaps into pauperism, *and* a tendency to lower the efficiency of the working force—immediately by provoking psychological reactions and cumulatively by weakening physical stamina and impairing general health and vitality. Whatever benefits may accrue to consumers in lower prices or to employers in higher profits are by no means net gains to the community. In the social balance sheet such restricted benefits are offset or overbalanced by the deprivations imposed on the "sweated" employees and the cost of social-welfare work imposed on the general taxpayer. Use of superior bargaining power to force wage rates down below a level consistent with the maintenance of sustained productive efficiency

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reduced product or they can use the saved purchasing power to buy more of other goods.

If, despite the lower cost of production, they have to pay the same price and hence buy the same amount of the product, the rest of their purchasing power may go further—buy more of other goods. This will follow from the release of some part of the capital and labor previously required to produce the given amount of the cost-reduced goods, the transfer of these released factors of production to other industries, and an increase in the supply and reduction in the prices of their products—provided, of course, that the redistribution of income does not adversely affect the total volume of expenditures.

and wholesome living standards is not economical either from the social standpoint or from the standpoint of other enterprises forced to share in paying for the human damage wrought by the wage-parers.

Cutting wages below the marginal productivity level is rather exceptional under modern conditions. Protective labor legislation and labor unions have greatly curtailed opportunities for such strategy. Business nowadays seeks to reduce costs by improving efficiency—mainly through technical research and administrative experimentation. Under competitive conditions the differential profits thus obtained are likely to be temporary. To realize fully on his cost advantage the technological innovator is impelled to lower his price toward the new cost level and, other producers following suit in order to stay in business, consumers share in the benefits. A familiar example of this is Henry Ford and his motor enterprise. Under monopoly conditions, the transmission of the gains in efficiency is slower and, as long as the monopoly persists, remains incomplete because the monopolist is under no competitive pressure to reduce prices.[3] But even a monopolist will usually find it to his advantage, in the pursuit of maximum net revenue, to reduce his prices to some extent as his costs decline. He does this in order to stimulate sales.[4]

### *Raising Prices Not Always Socially Inexpedient*

Increasing the profits of an industry by raising prices is not always socially disadvantageous. When the market for a particular class of products becomes so disorganized that depressed prices do not accurately reflect underlying conditions of demand and supply, it may be economical to raise prices promptly toward such an equilibrium level as free competition would eventually establish.

Prices may be abnormally low in a particular industry because of a price war instigated to drive out some obnoxious producer. In this

3. The incidence of monopoly profits themselves on economic well-being, or the common welfare, is not here in question. The discussion relates solely to the effects of reduced costs from improvements in efficiency, assuming that noncompetitive conditions prevail in the market concerned. On the question of the relative stimulus to technical improvements under monopolistic and competitive conditions, see later sections of this chapter. On the question of how the concentration of purchasing power in the hands of those who obtain monopoly revenues in one form or another affects the regularity of total expenditures (spending plus investment), and therewith the stability of the economic process as a whole, see Chapter 7.

4. Only if the demand for the product had an elasticity of less than unity would a monopolist have no incentive to reduce his price when his total unit costs declined.

case, cartelization is more likely to be cause of conditions than effect, source of disturbance than remedy. Again the reason for the depressed prices may be that some inexperienced producer, perhaps without adequate information on his total cost of production, imprudently started a price-cutting campaign that, by all too familiar "chain reactions," degenerated into a heedless struggle for survival. Ruinous competition is not always confined to those industries, sometimes called natural monopolies, in which economists discern conditions theoretically incompatible with unfettered competition. Sometimes the abnormally low prices stem from influences outside the industry that upset the calculations of producers, no matter how well informed and prudent they may be. The classical example is the influence of adverse weather conditions on agricultural prices. An interruption of transportation on account of an earthquake, a flood, or a strike falls in the same category of disturbances caused by outside events.

If, for some such reason, prices for a product are chronically depressed below the total unit cost of producers operating at the optimum rate (considering the level of demand), it would be socially advantageous to adjust prices to the cost level. This would mean increasing the rate of return of efficient producers in the industry to the rate prevailing in other industries, after making allowances for risk. The difficulty is to find a procedure that insures production retrenchment, price increase, higher earnings, and that is not susceptible of misapplication. The leverage adequate to raise prices to an equilibrium level can elevate them beyond that level.

Besides this difficulty, account must also be taken of the retarding effect of the higher rate of profit on the correction of the underlying conditions responsible for the abnormally low prices. When prices in the particular industry are not being deliberately held down to force one or more recalcitrant producers out of the market, destructive prices are ordinarily a reflection of excessive capacity.[5] The sur-

5. Extremely low prices may be experienced in a particular branch of agriculture for several years due to a succession of bumper crops even though capacity may not be excessive from a long-run standpoint. The results of such a wholly fortuitous "abundance" are scarcely distinguishable from those, say, of speculative exuberance. Chapter 9 discusses the significance of such situations for economic policy.

In manufacturing and mining industries the size of output conforms much more closely to the calculated decisions of business managers. Surplus supply and nonremunerative prices in these industries generally reflect either an overinvestment in productive facilities or an irrational maintenance of output regardless of price.

plus capital and labor employed in the industry have somehow to be shifted to other employments before equilibrium can be restored. As long as a society encourages voluntary choices of occupation and avenues of investment, and depends on free business enterprise to allocate productive resources, it must impose some penalty for misdirected effort. Excess capacity means nothing else than misapplied labor and misdirected investment. This is true however excess capacity may have been brought about. It is true however inequitable may appear the free-market way of imposing losses on all capital invested and labor employed in an overexpanded industry. It is true even if the owners of only a fraction of these resources, or none of them, are responsible for the glut.

To withhold such a penalty is to thwart the corrective process on which, as things are, the health of a free-enterprise economy depends.[6]

### *Limited Significance of Exceptional Cases*

Though improving profit prospects by raising prices is not always contrary to the public interest, the exceptions are of limited practical significance. Prices in a competitive market sometimes fall below total costs of established producers marketing a substantial part of the current supply. They also sometimes remain at this unremunerative level for a long period. When they do so they usually call forth a steady supply from new and better-situated or more efficient

6. Of course, a society may, if it chooses, reimburse investors for their capital losses and indemnify workers for their unemployment or reduced wages, either out of taxes or through production curtailment and minimum-price regulation. In the former case, taxpayers must pay for the mistakes of the producers, though they would not have shared in the gains had the ill-advised ventures turned out more fortunately. In the latter case, the government may enforce its own output and price policies or sanction the concerted adoption of appropriate measures by cartels; but whichever of these courses it takes, the consumer foots the bill.

If losses are thus shifted from the shoulders of the "producers" in distressed industries, however, the only way open to a society that wants to avoid the cumulative increase of economic distortions is forcibly to expel *some* workers and *some* of the invested capital from the areas of excess capacity. At the same time, the government must leave *part* of the workers and *part* of the invested capital in those fields undisturbed. But it would not be easy to select suitable criteria for separating the sheep from the goats with unfailing justice. Moreover, implementation of such a policy would also require prohibition of entry of additional workers and of new capital into such industries, pending the elimination of excess capacity. In democratic societies, restrictions of this kind are frowned upon.

On the whole, the likelihood is strong that in democratic societies the price of exempting labor and capital in industries with excess capacity from the losses usually attending misdirected employment and misdirected investment will be a slow malignant growth undermining the vitality of the economic system.

sources. Few so-called "distressed industries" fail to include a fair proportion of prosperous and growing firms. But the producers who recover their total costs even at depressed prices may not be located within the same national economy in which most of the firms suffering sustained losses operate. The British cotton industry may in its entirety be sliding into bankruptcy while the Indian industry is rapidly expanding. What appears in Lancashire to be a subequilibrium price may in fact represent a new equilibrium price corresponding to less costly conditions of supply.

Proponents frequently contend that cartels are economically sound because they enable the members of an industry, by stabilizing prices and restricting output, to recover their costs and obtain a fair return. But what costs are legitimately recoverable? In economic analysis it will not do to accept at face value the protestations of cartel members that in the absence of concerted market control they are exposed to ruin.

Two important facts must be considered. First, business costs are not uniformly defined or easily determined. They are as variable as human judgment and accounting practice. What the businessman chooses to treat as costs, under whatever accounting category he may record the expenditure or in whatever accounting period he may seek to recoup the outlay, depends on managerial judgment or policy. But managerial policy depends, in turn, on business exigencies. It frequently happens that items designated as costs might more properly be designated as profits. Sometimes appropriations to a reserve for contingencies, or the allowance for current depreciation, actually represent capital increments—additions to surplus—rather than expenses.[7] Plainly, the concept of cost that is most serviceable for business management does not always coincide with the concept of cost that is most significant for economic analysis.

Second, even assuming agreement on what are and what are not cost elements, producers have no incontestable claim to reimbursement for every part of their costs in all circumstances. A business

7. Cf. B. G. Reis, *False Security*, Equinox Cooperative Press, New York, 1937. On the failure of published financial statements accurately to disclose the bases and methods of their compilation, see "A Study of Annual Reports to Stockholders as Compared With Annual Reports to the Commission," an unpublished study, made in 1938, available in the files of the Securities and Exchange Commission. Lyon, Watkins, and Abramson give a summary analysis of the findings in *Government and Economic Life*, The Brookings Institution, Washington, 1939, Vol. I, pp. 70-72.

enterprise economy is essentially a speculative economy. The prime function of an enterpriser is to take risks, to use an informed judgment in forecasting demand as freely expressed in the market, and to adapt such productive resources as he possesses, or by contract can command, to turning out the goods buyers want at prices they are willing to pay. If a businessman makes a mistake about what or how much buyers demand and produces an article that buyers do not want—or produces more of it than they will buy at a price above total unit cost—he must expect to take a loss.

The mere fact that a businessman incurs costs in producing something does not place society under obligation to see that he recovers those costs. A society that prefers freedom of choice to governmental coercion in making its economic arrangements gives businessmen an incentive to organize production by holding out a chance to make a profit when they produce the right things in the right amounts. At the same time it restrains their speculative impulses by holding them responsible for their decisions.

It would be wasteful to keep prices high enough to permit full cost recovery in a field when changes in demand or new techniques had created better opportunities elsewhere. What cartel members would regard as costs may in fact be nothing more than returns to misapplied resources.

### *Imperfect Functioning of Competitive Markets*

Conceivably, it may be economically sound in exceptional circumstances to raise prices to improve earnings in a distressed industry. Supposedly free markets as they actually function occasionally result in prices that do not cover total costs of even efficient producers. The prices of sugar, crude petroleum, wheat, and fish, for example, have sometimes reflected oversupply. The imbalance may be traceable to the vagaries of nature—or nature's unpredictable generosity may have had nothing to do with it. The imbalance may have its roots in producers' rigid adherence to habit and custom, or, at the opposite extreme, in their speculative impetuosity. Or the imbalance may reflect lack of information about superior alternative opportunities.

Whatever the cause of the surplus supply, any boosting of prices so as to cover costs and yield a return would be socially advantage-

ous, provided higher prices did not interfere with eliminating the surplus. This is a big proviso. In a free market, higher prices almost invariably stimulate output. Administrative control of prices, whether by cooperative action of businessmen or by order of government, can rarely have good results unless buttressed by coordinate control of output and capacity. Hence, beneficial as cartel action might conceivably be in lifting prices to a long-run equilibrium level, other vital issues are raised when prices are increased. In a democratic society it is a question what body, public or private, may safely be allowed to bar new investment in a given industry and to determine who shall supply the product, how much he may produce, and who shall be denied that privilege. What standards are to be employed in making these decisions must likewise be determined.

### *Another Kind of Imperfect Competition*

Unquestionably, legally free and nominally competitive markets do not always work as they are supposed to work. They do not continuously maintain a balanced price structure and a stable economic equilibrium. At times competition becomes too violent in some industries to perform its accredited functions. It leads to overcapacity, overproduction, and prices below cost. But it is not less true that in other industries competition sometimes becomes too feeble to perform its accredited functions. Underinvestment, underemployment, and excessive prices result.

Businessmen who criticize the competitive system are prone to concentrate attention on the economic ills that flow from competitive excesses. They neglect the ills that result from competitive deficiencies. Yet for every industry suffering from overdevelopment and subcost prices it would be easy to name one or more industries afflicted by underdevelopment and abnormally high prices.[8] Cotton textiles and bituminous coal are often cited as examples of how

8. Of course, this "affliction" is not painful to the producers in the underdeveloped industry. But it hurts consumers, and as the text below shows it impairs the vigor of the whole economy.

The fact that underinvestment and underproduction in a given industry do not injure the producers in that field goes far to explain the preoccupation of business critics of the competitive system with its susceptibility to reckless overexpansion—in some lines. In fact, from the business standpoint it is quite legitimate to confine the term "sick industry" to those lines of production in which capital, labor, and output are in oversupply. From the economic standpoint, however, this use of the term is misleading. A person with a chill or low blood pressure may be just as sick as one with a fever or high blood pressure.

competition leads to overexpansion and unprofitable prices. But anthracite coal, sulphur, aluminum, and borates show that the imperfections of competition are at least as great on the side of sluggishness as on the side of reckless excesses.

Indeed, a whole school of modern economists has grown up, devoted to the study of what is sometimes termed "imperfect competition," "monopolistic competition," or "oligopoly." [9] These economists emphasize what businessmen critics of the competitive system neglect; they find that the chief shortcoming of competition—as it actually operates in many fields—is its weakness, not its severity. It is significant that those whose business it is to analyze market processes and market behavior have in recent years been more impressed with the extent and implications of mild competition than of wild competition. They stress the prevalence of gentlemanly restraint and mutual deference among competitors in many fields. In fact, they find this sublimation of the competitive process so common that they reserve for it the term imperfect competition. In their usage, this term does not cover what the businessmen critics of the competitive system find its chief imperfection—its tendency here and there to degenerate into a breakneck struggle for survival among trade rivals.

### *Cartels Not Economic Stabilizers*

A just view of the effect of cartels on stability of particular industries has to take account of their relationship to both kinds of economic maladjustment to which a nominally competitive industrial system is exposed. Because cartels are an effective device for raising prices and profits, they may help to restore or safeguard a balanced market in some fields where overproduction is common.[10] But

9. In economic literature these terms are not always used as synonyms, but all of them connote a substantial throttling or supersession of competitive forces in price making. Cf. Joan Robinson, *The Economics of Imperfect Competition,* Macmillan, London, 1933; E. H. Chamberlin, *The Theory of Monopolistic Competition,* Harvard University Press, Cambridge, 1933; and *Proceedings of the American Economic Association,* Vol. XXVI (1936), pp. 15-94; *ibid.,* Vol. XXIX (1939), pp. 61-103.

The methods of analysis used by the economists of this school are not less abstract than those of the neoclassical school, whose theories they frequently and vigorously attack. But their premises differ. They tax the neoclassicists with lack of realism in basing their analyses on the premises of free competition and perfect mobility of productive factors.

10. Even in such fields, cartels may, of course, aggravate rather than abate business instability. By temporarily enforcing an uneconomical restriction of supply—to offset

deficient capacity, short supply, and excessive prices also disrupt general economic equilibrium, and no one has yet suggested that cartels tend to mitigate scarcity, excessive prices, and uneconomical profits.

In fact, the industries in which cartels are most common and most powerful are, in general, those in which maladjustments of this kind are most pronounced: radio apparatus, electrical appliances, photographic equipment, business machines, iron and steel, nonferrous metals, chemicals, glass, and optical instruments. In these fields, the characteristic tendency of cartels has been, not to rectify an economic distortion induced by unregulated expansion and overinvestment, but to foster an economic distortion through uninhibited restriction of supply and underinvestment.

Disturbances of general economic equilibrium that cartels promote by restricting supply in particular fields to less than what would balance the demand at prices permitting full cost recovery have disastrous consequences on the economic system, even though the stunted development of these industries has no adverse effect on the cartelized producers. The consequences for the whole economy are no less evil than those resulting from excess capacity and overproduction in other fields. For by constricting the channels of investment and retarding the conversion of savings into capital goods, cartelization of industry tends to bring about or accentuate a downward spiral in general business activity.[11] On net balance, cartels probably do more harm by fostering uneconomic scarcity in some industries than they do good by preventing uneconomic surplus in others. To achieve economic stability, only a program that recognizes the need of dealing with both aspects of competitive-market imperfection makes sense.

a current surplus—they may encourage expansion of capacity, either by nonmembers or surreptitiously by members, that will lead to an even greater excess supply. The oil industry is notorious for its performance in the roles of prince and pauper. So are copper and marine shipping. These volatile industries have experienced wide price swings under cartel influence, more or less independently of cyclical fluctuation in business generally.

11. This is not to say that cartels are the primary cause of business cycles. Far from it. But cartel restrictions do act as a damper on investment and a stimulus to savings through inflating profits. Thus cartels promote conditions inimical to sustained prosperity. At any rate, many economists regard the slowing down of investment activity and the accompanying retrenchment in capital goods industries as the key to business depressions. A wide difference of opinion exists, however, about what causes investment hesitancy. For further analysis of this aspect of cartel influence, see Chapter 7.

### *Test of Cartel Performance*

On the record, cartels have more commonly engaged in supporting prices than in reducing costs. Government-sponsored cartels have supported prices no less vigorously than those privately established. International rubber regulation has meant in practice only international restriction of production and exports. The successive sugar control schemes have all set limits on exports, and so have reduced supplies in world markets. None of these arrangements has been very effective in raising prices. But instead of trying to reduce costs as an alternative that might enable the same or even a larger supply to be marketed profitably, the persistent aim has been to broaden cartel coverage, intensify export restrictions, extend still further the protection of inefficient, high-cost producers, and strengthen the upward leverage on prices.

Other government-sponsored cartels, outside the group described in *Cartels in Action,* have followed a similar policy. Coffee valorization schemes, the tea consortium, and the wheat agreement all relied predominantly on curtailment of supplies to support prices or force them up. The coffee cartel did try to stimulate demand by advertising, but none of these control schemes attacked the problem of improving profit prospects by reducing costs.

Whether some or all of these intergovernmental commodity agreements, concerned as they are with agricultural products, constitute exceptions to the general rule that price-supporting measures are economically disadvantageous, is a question. Perhaps economic necessity justified a readjustment of supply-demand relationships by concerted restriction of output in some of these industries. At any rate, the readjustments effected or projected in sugar and wheat were so comparatively slight that they would hardly have been prejudicial to the interests of consumers.[12]

### *Restrictive Practices Among Voluntary Cartels*

In privately organized cartels, the evidence of restriction of output and exports is even clearer. In steel, aluminum, magnesium, electric lamps, and the various branches of the chemical industries,

12. For further discussion of this topic, see Chapter 9.

as already noted, the volume of supplies offered in particular markets has been regulated by cartel decisions or in accordance with cartel policies. The first steel cartel undertook to raise prices by restricting production. The latest arrangement provided for direct limitation of exports and reinforced this primary control by division of export markets among cartel members. Moreover, concentration in a joint sales agency of all export business allotted to certain national groups tended further to strengthen price controls.

The aluminum alliance established output quotas for all members and penalized those members that exceeded their quotas. It also established minimum prices for all export markets. The magnesium cartel restricted exports, and the Alig agreement between the Aluminum Company of America and I. G. Farbenindustrie limited expansion of production by the American partner.[13] The electric lamp cartel restricted supplies by keeping home markets for domestic firms and allocating export markets among members as well as by assessing royalties on the use of pooled patents.[14]

A Chilean export tax and local cartel arrangements have continually limited exports of natural nitrates, long the main source of supply of chemical nitrogen. In addition, accords in recent years between Chile and the international nitrogen cartel, which embraced the principal exporters of both byproduct and synthetic nitrogen, restricted exports of all nitrogenous materials. This cartel did not provide for exchange of technological information, despite the comparatively recent development and unsettled state of technology of atmospheric nitrogen fixation. Producers in different countries have exchanged licenses for various techniques, but not through the cartel. The nitrogen cartel, in fact, depended on specific agreements and mutual respect for established trade interests to limit capacity, hold down output, and control prices. In this field, technological cooperation with its high potential of cost reduction went forward in spite of the cartel rather than by means of it.

13. For text of the Alig agreement, see *Patents,* Committee on Patents, U.S. Senate, 77th Cong., 2d sess., Hearings pursuant to S. 2303 and S. 2491, Washington, 1942, Pt. II, pp. 1036-52. (These hearings will hereinafter be cited Bone, Pt. —, after the committee chairman.) The tenth article establishes the limitation on United States production.

14. Phoebus, as the lamp cartel was called, did not fix royalties in the first instance, but through its arbitration machinery it established royalty standards and supervised the entire patent-licensing procedure. See *Cartels in Action,* Chap. 8.

*Pattern of Chemical Cartels*

In the chemical industries generally, the pattern of cartelization is varied and complex. No single, comprehensive, multilateral accord covers the field. It is therefore necessary to survey the characteristic features of many bilateral agreements and trade usages that combine to form a network of market regulation binding all branches of chemical manufacture into a seemingly amorphous yet actually integrated whole.

The basis of market control in the chemical industries is the mutual respect for vested interests among the great chemical companies that, with their satellites, dominate this expansive field. Industrial chemistry is technologically an unfenced province—an area of great open spaces. By the settled custom of nontrespass, however, it has been cut up, from the commercial standpoint, into a maze of strips, lots, and domains resembling a sprawling feudal hierarchy of tenants, socmen, thanes, and overlords. These various estates are all endowed with a status, fixed either by custom or prescriptive right, or by charter or treaty.

Some of the boundary lines mark off geographic territories as the exclusive domain of certain companies or groups of companies. By and large, Germany and much of middle Europe was IG's exclusive province before World War II. Similarly, the British Empire was ICI's preserve. The United States, or North America, "belonged" to du Pont or, in some particular product or technique, it might be Union Carbide, Allied Chemical, American Cyanamid, or Dow.[15]

The restrictions—on who may produce particular chemicals, what markets are open to a given manufacturer, and how much of the demand in a given market each producer is entitled to supply—obviously help support prices.[16] Once a chemical company gets a niche in the hierarchical structure of the industry and becomes es-

15. For a detailed survey of these arrangements, see *Cartels in Action,* Chaps. 9, 10, 11.

16. As shown in *Cartels in Action,* IG did not engage in synthetic rubber manufacture in America, partly because it did not want to offend du Pont. It did not produce acetic anhydride in America lest it offend Union Carbide. It would not participate in a synthetic nitrogen venture for fear of irritating Allied Chemical and du Pont. For its part, du Pont renounced any interest in pharmaceuticals. In South America all parties agreed to quotas in the explosives, dyestuffs, and alkali markets, or agreed to participate in joint enterprises, as for rayon and cellophane manufacture and for caustic soda and chlorine production.

tablished as a going concern, its position is virtually secure. As long as it conducts itself with due deference to the rights of other members of the hierarchy, experience shows that they will generally reciprocate. Thus the custom of nontrespass tends to reduce the risk of displacement and to foster managerial indifference toward improvements in efficiency and lowering of costs.

### *How Chemical Patents and Processes Agreements Work*

Another outstanding feature of cartels in the chemical industries is more formal and explicit: the omnipresent patents and processes agreements. Some are very broad, like the one between du Pont and ICI. In effect, this is a blanket undertaking by du Pont and ICI not to compete and, conversely, to cooperate loyally, as partners are supposed to do. Other agreements are narrower, like the innumerable patent exchange or cross-licensing agreements on specific dyestuff patents among du Pont, General Aniline (IG), National Aniline (Allied), Calco (American Cyanamid), and the Swiss group (Ciba, Sandoz, and Geigy). Whether broad or narrow, multilateral or bilateral, each agreement in the chemical industries to exchange patent rights or technical information includes some restriction, expressed or implied, limiting one or both, some or all, of the parties in the use of the techniques. The restrictions may apply to the market in which a licensee may sell, to the kind or quality of product he may produce, to the uses to which he may put it or for which he may sell it, to the amount of his output, to the minimum price he may charge, or to all these aspects of his business and to others besides. Such restrictions unquestionably tend to reduce supply and keep up prices.[17]

On the other hand, these international patents and processes agreements do tend also to reduce costs of the parties to them. One of the most effective ways to reduce costs is to make productive techniques more efficient. Interchange of technical information helps to improve productive efficiency. Patents and processes agreements usually provide for such an interchange. Thus research workers in one company's laboratories learn what the technicians of other companies are doing, and what they have achieved, earlier than they

17. See *Cartels in Action*, Chaps. 10, 11.

would otherwise.[18] This give-and-take process may stimulate the efforts and the imagination of all those engaged in research work. Closer contact among technicians working on similar problems for separate companies in distant countries may quicken the individual impulse of each to excel.

Comparison of results obtained by different approaches, or under slightly modified conditions, is one of the most prolific sources of the fresh insights that are indispensable to scientific discovery. Moreover, a technical improvement in processes in one field may be applicable to, and may reduce costs in, related fields. Yet the innovator may have no glimmering of this wider significance of his new technique because of his unfamiliarity with problems and conditions outside his special province.

### *Chemical Advance Through Cooperation*

When IG technicians discovered a method of chlorinating paraffin waxes so as to produce synthetic oils they thought they were on the trail of a new ingredient for soap or detergents. They were. But when IG transmitted the discovery to Standard Oil of New Jersey in 1931, pursuant to their "marriage contract," Standard's technicians discovered that the process was also useful in producing lubricants with a lower pouring point.[19]

As it worked out, the economic significance and commercial value of the new process were greater, at least in the thirties, in the production of a pour-point depressant for lubricants than in soapmaking. Yet IG had no inkling of this alternative use. Its technicians were preoccupied with other problems, and had there been no exchange of technical information IG might never have discovered the economically most advantageous use of chlorinating paraffin waxes.

The gains in efficiency from technical collaboration are substantial, and exchange agreements relating to patents and processes facilitate advances in the industrial arts and reduction of costs.

18. However, the terms of technical interchange arrangements may discourage some cartel members, particularly the smaller affiliates, from maintaining research laboratories. This appears to have occurred in the incandescent electric lamp industry. See *ibid.*, Chap. 8.

19. "Pouring point" is the term used in the trade to indicate the temperature at which oil becomes too thick and sticky to serve as a lubricant. Without effective pour-point depressants, of which Paraflow was one of the first though by no means the best, high-altitude flying as it developed during the war would have been impossible. See *ibid.*, Chap. 11. See also Bone, Pt. IV, pp. 1750-69, and Pt. IX, p. 5135, and accompanying exhibits.

Moreover, not only do they help reduce costs of production directly but they also tend to keep down general administrative expense. In the absence of such arrangements expenditures on patent protection would probably be much higher. Each producer would have to ferret out the secrets of his rivals as best he could, and offset them however he could. Continual checking of patent applications, analysis of patent specifications, assertion of conflicting claims, and negotiation of *ad hoc* settlements or legal adjudication of controversies would surely be necessary on a much more extensive scale and involve greater overhead costs than under a system of regular technical collaboration.

Patent exchange agreements of international scope also give the parties to them important commercial advantages. Popular sentiment favors domestic producers. When a foreign company exploits its patents directly through a domestic subsidiary, it has to overcome this common prejudice. The exchange of patent rights permits locally owned companies to exploit them and gives an advantage all around.

While patent exchange arrangements have undoubted advantages, both from the public and the business standpoint, these are far from being absolute. For such arrangements also fortify monopoly. The restrictions on output and pricing they bring about directly or indirectly are more rigorous than those the several patent-holders, acting independently, could possibly enforce. Under patent-pooling arrangements cartel members gain most of the advantages that flow from the interchange of technical information and use of the best known techniques all along the line. But patent agreements also (1) restrain competition among members in the exploitation of the cross-licensed techniques and (2) stifle competition from ineligible producers. Outsiders, operating with their own techniques, might possibly be able to produce and sell at a profit in competition with individual cartel members; but the chances are remote indeed that they could do so in the face of a cartel that pools patents and processes as cartels in the chemical industries do.[20]

20. This is not to imply either that society has an interest in keeping non-cartel members in the field regardless of their relative cost position or that the cartel's power to oust nonaffiliated firms from the industry rests on superior efficiency of its members. What is questionable is simply that the interests of society can be served by a private monopoly of know-how.

*Public Stake in Chemical Technology*

Alternative methods are available for most if not all chemical-manufacturing processes, and substitutes can be found for many chemicals. Without agreements for exchange of technical information, even if every process and every product in a given branch of chemical manufacture were patented the monopoly power of the several patentees would be greatly limited. Although each chemical company might control many techniques, few of these techniques would be exempt from the competition of alternative processes available to other producers. Furthermore, none of the patented techniques would be exempt from the risk of displacement by the development of a superior process. But when a network of patents and processes agreements covers a whole field of manufacture, as in the chemical industries, the participants are thoroughly insulated from competition. They then use their privileged position to garner for themselves the gains of technical collaboration.

What followed from the exchange between Standard Oil and IG of research data and patents relating to the chlorination of paraffin waxes shows the economic significance of this type of cartel practice. Paraflow was introduced in 1931 and sales, at $3 a gallon, amounted to 35,000 gallons. With the rapid growth of sales, which reached 900,000 gallons in 1937, Standard reduced the price by one third—to $1.90 per gallon—but thereafter held it unchanged to 1942. On a gross sales revenue from this product in 1940 of $2,103,814.40, Standard and IG realized a net profit of $1,440,537.62, of which Standard retained under the terms of the cartel agreement 96.5 per cent.[21] Even such large profits may not have exhausted the economic advantages of technical cooperation but they must have left the share of the public in those advantages comparatively small.

21. Bone, Pt. IV, pp. 1735, 1847-48. See also *Cartels in Action,* Chap. 11. Standard Oil Development Company, a wholly owned subsidiary of Standard Oil of New Jersey, makes and sells Paraflow. Before the war, at least, Development paid a royalty of 17.5 per cent of net profits on Paraflow to Standard-IG, the joint subsidiary of these cartel partners. Since Standard's share in Standard-IG was 80 per cent, its proportion of Paraflow net profits was 82.5 per cent plus 14 per cent, or 96.5 per cent.

The ratio of these net profits to capital investment in the facilities used to produce Paraflow would be more illuminating, of course, than their ratio to gross sales. Unfortunately, investment figures are not available. However, it would be an extraordinary anomaly to find that a 68.5 per cent ratio of net profits to gross sales of a commodity of this kind failed to yield an exceptionally high return on investment.

If the interchange of technical information and patent rights tends to promote technological advance and reduce costs, as indeed it seems to do, some other device than the cartel agreement is plainly required if the public is to get an equitable share in the resultant benefits. The question arises whether the patent system ought to be thoroughly overhauled or some minor change in the statutory definition or judicial construction of the scope of patent privileges would be enough to obtain for the general public the full benefits to which it would seem to be entitled.[22] Without attempting to answer it, we suggest that unless Congress radically limits patent privileges the public stands to lose in many fields a large part of the gains from technical collaboration among industrial research laboratories. Of course, it would lose all such gains if patent exchanges were simply prohibited.

### *Analysis of Cartel Pricing*

Prices in cartelized markets, like prices in competitive markets, are subject to many influences. Changes in technology, population, demand, taste, transportation costs, tariffs—all these and many more forces affect prices of specific commodities and price relationships. Some of these forces may reinforce the influence of cartel policies on prices; others may counteract it. It is impossible to segregate and measure exactly the influence of cartel restrictions on prices of any particular product or in any given market. However, in estimating the economic consequences of cartels, it is important to consider certain types of price behavior and price relationships that are common in cartelized industries.

First, to the extent that cartel restrictions raise prices (or keep them from falling) and thereby bring about disproportionately wide cost-price margins, they retard economic expansion and lead to waste of economic resources. A continuing disproportion between costs and prices means either that part of the community's productive resources are idle or that part of them are employed elsewhere at a lower return than they might yield if more economically distributed.

Second, to the extent that cartel restrictions make controlled prices more rigid than they would otherwise be, cartels impede the fullest

22. For a fuller analysis of the relation of patent policy to the cartel problem, see Chapter 8.

and most advantageous employment of resources. Rigidity of the cartel-controlled prices probably aggravates cyclical fluctuations in business activity.[23] By exaggerating the distortion of price relationships it prolongs depressions and shortens booms.

Third, to the extent that cartel restrictions lead to price discrimination, whether personal, geographic, or based on mode of use of the product, cartels promote a similar uneconomic use of productive resources. The inevitable tendency of such price discrimination is to handicap and discourage expansion of production or to prevent expansion of consumption.[24]

### *Evidence of Price Boosting*

The case studies of particular industries in *Cartels in Action* indicate the influence such organizations have exerted, in the three ways just mentioned, on price behavior and price relationships.[25] The

23. Cf. *Price Behavior and Business Policy,* TNEC Monograph No. 1, Washington, 1940, Pt. I, Chap. 3, especially pp. 43-52. Some prices are in their nature inflexible or sluggish. These include custom-fixed prices, such as rents, wages, and the prices of certain commodities like chewing gum, as well as legally fixed prices, such as public utility rates.

The irresponsiveness of cartel-fixed prices to market changes puts additional pressure on the relatively flexible prices when the whole price system is subjected to price-elevating or price-depressing influences, such as those of monetary origin. This aggravates the lopsidedness in the price structure. The larger the sector of the economy characterized by price immobility, the greater are the difficulties of overcoming these price distortions and restoring general equilibrium in the price system. The action of cartels in "freezing" prices that would otherwise absorb part of the shock of deflationary forces clearly hinders the recovery process. Cartels, in other words, make life tougher for the noncartelized part of the business community as well as for the general public. For further analysis of the relation of cartels to business cycles, see text, Chapter 7.

24. The contention in favor of cartels that the stimulus to the buyers favored by a comparatively low price offsets the repressive influence of the comparatively high price to others is partly true. On two grounds, however, it appears unlikely that the offset will balance the handicap.

First, usually the buyers receiving the price favor either already possess a monopolistic leverage in the market in which they sell, or else they use the discriminatory price to acquire such a leverage. In either case the low price gives a bounty for not producing instead of encouraging expansion of production.

Second, the price favor to some buyers or areas and the price discrimination against others bear no relation to the relative efficiency or economic deserts of the two groups. The price differential springs from the profit-making exigencies of the cartelized sellers. It cannot be assumed that in shaping their price policy cartel members take account of the prospective ability of some buyers to use the goods sold more advantageously than other buyers.

25. Owing to the complexity of structure and the wide-ranging scope of operations of the chemical industries, no attempt was made in surveying cartel arrangements in that field systematically to analyze price policy and price patterns in the field as a whole. However, certain data on chemical prices presented below, considered together with the price characteristics reviewed in Chapter 9 of *Cartels in Action,* furnish some clues to the bearing of chemical cartels on prices.

maintenance of prices above an economically warranted level seems, on the record, to have occurred quite consistently under cartel manipulation in aluminum, magnesium, electric lamps, rubber, and iron and steel.[26] Occasionally nitrogen prices have also been kept so high that abnormally wide profit margins have resulted. The more frequent and more glaring instances occurred before large-scale synthetic production.[27] Among the industries surveyed in *Cartels in Action,* only in sugar have cartel tactics failed to boost prices substantially above cost-indemnifying levels even for relatively high-cost producers.[28] Apparently the weakness of the successive sugar cartels, rather than the foresight and restraint of their promoters, explains this phenomenon.

The diversified and constantly changing character of products, and the heterogeneous forms and shifting scope of cartel organization in the chemical industries make it difficult to estimate the net effect of market control arrangements on prices. The specific examples given in *Cartels in Action* may or may not be typical,[29] but as they harmonize with the tendency implicit in cartel policies to restrict investment and output, access to and use of technology, and access to markets, they are evidently not exceptional.

The United States Bureau of Labor Statistics publishes a composite index of chemical prices. It covers only American markets and includes only a limited number of staple chemicals. While far from

26. In the immediate prewar record of the rubber cartel and the aluminum alliance there is evidence of the emergence of genuine price stabilization policies. In 1937, both followed a strategy of foregoing some part of the price advance they apparently might have obtained by a more rigorous restriction of supply. See *Cartels in Action,* Chaps. 3, 6.

27. The precipitate decline of chemical nitrogen prices after the collapse of the first international nitrogen cartel in 1931 furnishes some indication of the cartel's policy. Within a month of its dissolution, the London price of sulphate of ammonia had declined more than 43 per cent. The annual average price in 1930, under cartel regulation, was 50 per cent higher than the annual average price in 1932 under competitive-market regulation. Of course, the depression in general business also had a good deal to do with this decline.

After the reorganization of the cartel in 1932, prices rose gradually but only moderately. The presence of substantial excess capacity in the industry was apparently a decisive factor in holding cartel prices during the thirties well below predepression levels. See *Cartels in Action,* Chap. 4.

28. Under the Chadbourne Plan (1931–1935) the London price of raw sugar hovered around one cent a pound, substantially below the pre-cartel level, which, however, was also a predepression level. Even after the consummation of the International Sugar Agreement in 1937, the London price rose only moderately. The 1938 annual average price in the London market was only 1.10 cents a pound, as compared with a 1933–1936 range of 1.01 to 1.06 cents a pound. See *Cartels in Action,* Chap. 2.

29. See Chap. 9.

TABLE 2

PRICE MOVEMENTS OF CHEMICALS, MANUFACTURED PRODUCTS, AND ALL COMMODITIES, UNITED STATES, 1926–1941

| Year | Chemicals | Manufactured Products | All Commodities |
|---|---|---|---|
| 1926 | 100.0 | 100.0 | 100.0 |
| 1927 | 99.5 | 95.0 | 95.4 |
| 1928 | 98.6 | 95.9 | 96.7 |
| 1929 | 99.7 | 94.5 | 95.3 |
| 1930 | 96.9 | 88.0 | 86.4 |
| 1931 | 90.2 | 77.0 | 73.0 |
| 1932 | 88.8 | 70.3 | 64.8 |
| 1933 | 86.8 | 70.5 | 65.9 |
| 1934 | 86.8 | 78.2 | 74.9 |
| 1935 | 86.6 | 82.2 | 80.0 |
| 1936 | 87.9 | 82.0 | 80.8 |
| 1937 | 88.2 | 87.2 | 86.3 |
| 1938 | 86.4 | 82.2 | 78.6 |
| 1939 | 84.7 | 80.4 | 77.1 |
| 1940 | 85.1 | 81.6 | 78.6 |
| 1941 | 87.2 | 89.1 | 87.3 |

*Source:* Bureau of Labor Statistics, reproduced in *Survey of Current Business*, 1942 Supplement, pp. 18-19.

an ideal index, it probably gives a fair cross-section of the general course of chemical prices over long periods. In the sixteen years from 1926 to 1941 chemical prices showed a downward trend that brought the 1941 average to about 13 per cent below the 1926 average. (See Table 2.) This movement was neither different from nor more pronounced than that of manufactured products in general or that of all commodities. But in view of the rapid technological advances in several branches of the youthful chemical industries a 13 per cent decline in the price index seems small. An industrial revolution took place during this period in chemicals, more sweeping than any that occurred in other manufacturing fields with the possible exception of electronics. Chemical prices seem not to have reflected the cost reductions that technical improvements made possible. Cartel restrictions may well have been an important factor in retarding that decline.

The course of prices of one chemical in this index suggests, although it does not prove, that cartel restrictions may be effective in delaying price readjustments after costs have been reduced by tech-

TABLE 3

METHANOL PRICES AND OUTPUT, UNITED STATES, 1926–1941

| Year | Prices | | Output | |
|---|---|---|---|---|
| | Wood | Synthetic | Wood | Synthetic |
| | *(In Cents Per Gallon)* | | *(In Thousands of Gallons)* | |
| 1926 | 63 | 71 | 674 | a |
| 1927 | 67 | 69 | 665 | a |
| 1928 | 49 | 49 | 628 | a |
| 1929 | 57 | 58 | 578 | a |
| 1930 | 41 | 42 | 402 | 632 |
| 1931 | 36 | 38 | 275 | 584 |
| 1932 | 37 | 36 | 207 | 636 |
| 1933 | 37 | 36 | 257 | 733 |
| 1934 | 38 | 36 | 343 | 1,045 |
| 1935 | 38 | 36 | 421 | 1,504 |
| 1936 | 38 | 36 | 465 | 2,130 |
| 1937 | 36 | 33 | 479 | 2,651 |
| 1938 | 36 | 33 | 348 | 2,169 |
| 1939 | 36 | 33 | 388 | 2,855 |
| 1940 | 34 | 31 | 441 | 3,745 |
| 1941 | 43 | 29 | 471 | 4,667 |

*Source: Survey of Current Business,* 1942 Supplement, p. 102.
a. Not available.

nical innovations. When synthetic methanol was first produced in the United States, in 1926, it sold for 71 cents a gallon. (See Table 3.) During the next five years, mainly as a result of intermittent competition from wood alcohol and of expanding capacity, the price dropped to 38 cents a gallon. Then for five years it remained unchanged at 36 cents. In 1937 it was reduced to 33 cents, where it remained until 1940, when it was reduced to 31 cents. In 1941 it was reduced to 29 cents a gallon.

From 1926 to 1931, inclusive, wood alcohol sold for less than synthetic methanol, except in 1928 when the averages were the same. It might be inferred from this either that the hardwood distillers (wood alcohol producers) were setting the pace in the market, trying to squeeze intruders out of their preserves,[30] or that the

30. William S. Gray & Co., a joint sales agency, markets the output of a score of hardwood distillers who together produce about 95 per cent of the total domestic output of crude methanol, according to the Department of Justice. See *U.S.* v. *William S. Gray & Co., et al.*, Indictment under the antitrust laws returned April 5, 1944 (Criminal No. 117-66), in U.S. District Court for the Southern District of New York. The government filed a complaint (Civil Action No. 27-145) in the same cause on August 29, 1944. In the criminal case all defendants except two pleaded *nolo contendere* and paid fines. The civil action was still pending in May 1947.

synthetic producers were deliberately refraining from fully exploiting the advantages of the new technique in deference to the established trade interests of the hardwood distillers. Some support for the second interpretation may be found in the price movement from 1932 to 1940, when the price relationship altered and the synthetic product sold continuously for one to three cents a gallon less. During these nine years, when a sixfold expansion of synthetic production took place, the price declined only 5 cents, or 14 per cent.

These developments suggest that Union Carbide & Carbon, producer of most domestic synthetic methanol, was content for long periods to keep the price higher than costs required. At any rate, cartel affiliations apparently gave it the power to do so.[31] If sales of 584,000 gallons in 1931 at an average of 38 cents a gallon were profitable, and the growth of demand warranted an increase in capacity, permitting sales of 2,855,000 gallons in 1939, it is hard to believe that unit costs had not declined more than 5 cents a gallon over this period. The price reduction of 4 cents in the next two years, to 29 cents a gallon in 1941, and the further expansion of capacity point to a wide discrepancy between costs and prices.

### *Profit Rates Under Major Cartels*

Without authentic cost data on specific chemicals, the reported net earnings of leading chemical companies afford perhaps the best available evidence of the influence of cartel restrictions on cost-price relationships. Even in the worst years of the Great Depression none of the major American chemical companies had a deficit. (See Table 4.) Eight of the larger companies in the poorest business year of the decade, 1932, earned an average of 6.4 per cent on invested capital. Their average earnings were double this rate in 1940, a fairly pros-

31. See Bone, Pt. V, pp. 2266, 2345, 2349, 2353; also Pt. III, pp. 1373-82, 1405-07, 1439, 1464. For a general discussion of Union Carbide's connections, consult *Cartels in Action*, Chap. 9.

Recent cases in point are *U.S.* v. *Union Carbide & Carbon Corp., et al.*, Indictment returned June 27, 1946 in U.S. District Court for Colorado charging monopolization and price fixing of vanadium oxide and ferrovanadium; and *U.S.* v. *Linde Air Products Co., et al.*, Complaint filed January 1946 in U.S. District Court for the Northern District of Illinois, Civil No. 46-C-783, alleging a combination in restraint of trade in arc welding rods. The Linde Co. is a subsidiary of Union Carbide. The indictment against the parent company charges that defendants restricted imports of vanadium from Canada.

TABLE 4

NET EARNINGS RATES OF EIGHT MAJOR AMERICAN CHEMICAL COMPANIES IN SPECIFIED PREWAR YEARS, 1929–1941

| Company | 1929 | 1932 | 1933 | 1937 | 1939 | 1940 | 1941 |
|---|---|---|---|---|---|---|---|
| Average for the group | 15.1 | 6.4 | 9.9 | 11.9 | 9.7 | 12.8 | 13.2 |
| Du Pont | 16.5 | 5.0 | 7.4 | 13.4 | 13.7 | 13.9 | 13.7 |
| Allied Chemical | 11.4 | 4.2 | 6.2 | 11.1 | 9.4 | 9.2 | 10.4 |
| Union Carbide | 12.6 | 4.4 | 6.7 | 16.5 | 11.8 | 13.8 | 13.4 |
| American Cyanamid | 12.5 | 1.5 | 5.8 | 9.7 | 9.3 | 7.7 | 17.8 |
| Monsanto | 12.3 | 7.8 | 14.9 | 13.6 | 11.4 | 12.5 | 11.9 |
| Dow | 13.0 | 12.0 | 9.6 | 13.1 | 11.1 | 17.2 | 12.3 |
| Hercules | 11.0 | 2.6 | 6.8 | 10.5 | 12.0 | 12.7 | 13.7 |
| Commercial Solvents | 31.8 | 14.0 | 21.6 | 7.9 | 9.1 | 12.4 | 12.7 |

*Source:* Standard and Poor's Industry Survey, *Chemicals,* Pt. II, January 7, 1944, pp. 20-22. American Cyanamid was not included in the Standard and Poor's survey. Data for that company are computed here on a comparable basis, but partly estimated, from published financial statements; likewise, data for Dow in years before 1937. Net earnings, after payment of federal taxes and allowance for depreciation, are expressed as percentage of invested capital, as represented by total assets less funded debt.

perous year,[32] and in the boom year 1929 they had profits of no less than 15.1 per cent.

The normal competitive rate of return in manufacturing industry would be hard to determine, but certainly American industry in general enjoyed no such sustained earnings as did chemicals through the economic trials of the thirties. Indeed, during the booming twenties average business profits were substantially lower than those of the chemical industries in the depressed thirties. In its survey of corporation earnings during the postwar decade, 1919–1928, the National Bureau of Economic Research found that the average rate of return on invested capital for 3,144 manufacturing, trading, mining, and service corporations was 9 per cent.[33]

However, the survey indicates that 9 per cent probably overstates the average rate of profit in American industry, as the sample included only corporations doing business throughout the ten-year

32. The Federal Trade Commission found in a survey of the chemical industries that in 1939, thirteen major companies paid dividends equivalent to an average return of 10.1 per cent on stockholders' equity. In the same year the net earnings on total assets of these companies averaged 15 per cent before income taxes. *Chemicals (Industrial) Manufacturing Corporations,* Federal Trade Commission, Washington, March 18, 1941, pp. 6, 9.

33. Ralph C. Epstein, *Industrial Profits in the United States,* National Bureau of Economic Research, Publication No. 26, New York, 1934, pp. 24-25.

period.[34] An average derived from official corporation income-tax data for the years 1924–1928, on the other hand, was only 6.15 per cent, according to the survey. In view of the uninterrupted prosperity during these five years, the average rate of profits in the thirties was probably much less, both for the sample of 3,144 companies and for all tax-reporting corporations. From any standpoint, therefore, the profits of the major American chemical companies were above the general industrial average.

The available evidence also shows high, noncompetitive rates of return among foreign chemical companies. ICI paid average annual dividends of 7.2 per cent on its ordinary stock in 1927–1936, despite an original overcapitalization that a competent analyst estimates to have been nearly 50 per cent.[35] At the same time it was accumulating a substantial surplus and writing off the overvaluations in its asset accounts. IG paid dividends of 12 per cent in 1928 and 1929, 4.3 per cent in 1931, and 6 per cent in 1932.[36]

Collateral evidence also supports the inference that cartels in the chemical industries have promoted exceptionally wide profit margins. In 1937 du Pont and ICI agreed to invest in local manufacturing facilities for their joint subsidiaries in South America, the Duperial twins, but only if the projects promised a net return, after all taxes, of at least 17.5 per cent in Brazil and Chile and 15 per cent in Argentina.[37]

In all the other cartelized industries surveyed in *Cartels in Action* for which there are profits data, the earnings rates for leading members suggest similar cost-price relationships. Aluminum Company of America, through good times and bad during its first half

34. On the whole, moreover, business conditions in the postwar decade were better than average. Finally, as the Bureau's study points out, the inclusion in net earnings of dividends received along with operating profits probably tends toward overstatement of corporate earning power.

35. ICI *Proceedings* at the Tenth Annual General Meeting, April 29, 1937, London, 1937, pp. 2-3. According to Patrick Fitzgerald, ICI's original capitalization of £56,-803,000 exceeded by £17,803,000 the current market value of the securities of its constituent concerns. See his *Industrial Combination in England,* 2d ed., Pitman, London, 1932, p. 101.

36. Bureau of Foreign and Domestic Commerce, Trade Information Bulletin No. 690, *German Chemical Developments in 1929,* Washington, 1930, p. 3; and *idem, The European Chemical Industry in 1932,* Washington, 1933, pp. 5, 19.

37. Corwin D. Edwards, *Economic and Political Aspects of International Cartels,* Monograph No. 1 of the Subcommittee on War Mobilization, Committee on Military Affairs, U.S. Senate, pursuant to S.Res. 107, 78th Cong., 2d sess., Washington, 1944, p. 15.

century, had an average annual rate of return on stockholders' equity of 12.03 per cent.[38] General Electric in every year for which data are available has earned more than 20 per cent (net) in its lamp department on the average capital investment in that branch of its business.[39] In the rubber industry, under the Stevenson Plan, many plantation companies made fabulous profits during the period of critical shortage in the twenties. Data on costs and prices suggest that even after supply had begun to catch up with demand in the thirties, the International Rubber Regulation Committee was able to maintain prices yielding a gross profit margin from 50 to 100 per cent above costs of production.[40]

### *Cost-Price Relationships in Other Cartelized Industries*

Outside the industries surveyed in *Cartels in Action,* the record reveals the same general picture of the influence of cartel controls on prices and profits. In some fields, however, cartels have been unable to raise prices appreciably or to maintain high prices. The coffee, wood pulp, and wool cartels are cases in point, even though at times they have exercised some monopoly power in certain markets. Such weak cartels as these are more common among industries operating at or near the raw material stage of production, in which the number of producers is large, than among manufacturing industries, in which production is usually concentrated in the hands of a few corporations. As a rule, collective regulation of the market depends on governmental sponsorship in the raw materials industries. But, except in a comparatively few instances, such as tin, intergovernmental commodity agreements are so exposed to political and diplomatic pressures that really tight controls are impracticable. The more complicated, intricate, refined, or specialized the product, the greater is the likelihood, other things being equal, that strong cartel controls will be established and that correspondingly high prices will be exacted.

### *The Case of Copper*

Copper is something of an intermediate product, not precisely a raw material nor yet a fully finished commodity. The history of

38. See *Cartels in Action,* Chap. 6.
39. *Ibid.,* Chap. 8.
40. *Ibid.,* Chap. 3.

copper cartels illustrates the ups and downs of voluntary cartel arrangements in which patents, trade-marks, and similar legal privileges play no role. Refined copper is a bulk product, a staple of modern industry. Though it is a primary material for many fabricating, foundry, and assembly operations, it is far from being a raw material in the same sense as are sugar, wool, and coffee, or even crude rubber. Copper mining is concentrated to some extent but copper smelting and refining are even more highly concentrated, and these three major processes—mining, smelting, and refining—are largely integrated. This integration has facilitated rigorous cartel restrictions on output, but it has not prevented the opening of new sources of supply in response to high prices. The record of the copper cartels between the two world wars is one of alternate high-handed market manipulation and market demoralization under the rule of every man for himself.

The price of copper rose to a wartime peak of 30 cents a pound in June 1917 from a 1914 low of less than 11 cents.[41] In August 1918 the United States War Industries Board fixed a price ceiling of 26 cents a pound, and a year later the monthly average New York price was 22.3 cents. Stocks on hand at the end of World War I were about double the prewar normal. An even greater menace was expansion of capacity under the influence of high prices.

The first postwar copper cartel tried to liquidate in an orderly way the excessive stocks, amounting to about 165,000 tons, or approximately 15 per cent of normal annual output.[42] Except for supplies in government hands, almost all this excess copper was held by American companies. In 1919 the four largest—Anaconda, Phelps-Dodge, and the two Guggenheim companies, Kennecott and American Smelting & Refining—together with some smaller producers, formed the Copper Export Association. As an economic objective, orderly liquidation of stocks was justifiable, but the tactics employed were singularly ill adapted to its attainment. The cartel tried to keep prices close to the high wartime level and in Septem-

41. *Investigation of the Concentration of Economic Power,* Temporary National Economic Committee, Hearings pursuant to Pub.Res. 113, 75th Cong., Pt. XXV, *Cartels,* Washington, 1940, Ex. 2100, pp. 13394-400. (Hereinafter cited: TNEC Hearings, Pt. —.) The facts in this section have been taken largely from this source. See also W. Y. Elliott and others, *International Control of Non-Ferrous Metals,* Macmillan, New York, 1937, Chaps. 8, 9.
42. TNEC Hearings, Pt. XXV, pp. 13117-35.

ber 1920 copper was still selling for more than 18 cents a pound, or 50 per cent above prewar prices. As a result, excess stocks, instead of declining, had more than doubled by the end of 1920.

*Challenge From Africa*

The 1921 depression forced a revision of policy. Cartel members reduced prices to the prewar level; they earmarked 200,000 tons of metal in stock to the account of the Association; and twelve of them closed down their mines completely in May 1921 for nine months. These measures had the desired effect. By March 1923 copper stocks had been halved, and the price was up to 17 cents. But the strategy had worked too well: it had nurtured new sources of supply, particularly the great African mines that were destined to challenge American domination of the world market in the next two decades.[43] Partly as a result of this threatening outside competition, partly due to internal friction, the members dissolved the Copper Export Association at the end of 1923.

With consumption exceeding steadily enlarging production, prices fluctuated narrowly around 13 cents for the next three years and stocks declined to barely a two-month supply. Nevertheless, the cartel elements in the industry were not satisfied. Late in 1926 they organized Copper Exporters, Inc., the first Webb-Pomerene association to include in its membership foreign as well as American producers.[44] At first this was a simple price-fixing cartel. However, for three years, from October 1926 until the panic in October 1929, the cartel held production below steadily increasing consumption. World stocks by 1929 stood at a record low in relation to current deliveries. Prices, having slowly risen from 13 cents, rose steeply in 1927, and in March 1929 reached 21.2 cents. As buying slackened,

43. The Katanga mines in the Belgian Congo were the first to begin large-scale production. Between 1920 and 1930 Katanga output increased fivefold, from 50,000 tons a year to 300,000 tons. The Rhodesian mines were also being developed in the twenties preparatory to their spectacular expansion in the thirties, when they added about 500,000 tons annually to world copper supply. *Ibid.*, p. 13442.

Not to be outdone by the increasing production of African copper, the American companies greatly expanded their South American output during the twenties—from 200,000 tons to 700,000 tons annually. These developments signalled a decided eclipse of copper production in the United States. For decades this country had been the principal world copper supplier. In 1926 the United States still mined more than 50 per cent of world output. But by 1932 its production had fallen to only about 20 per cent of the world total, and its effective capacity was reduced to around 36 per cent of world capacity. See Elliott, *et al.*, *op. cit.*, pp. 479-80.

44. TNEC Hearings, Pt. XXV, pp. 13166-76.

the price shaded down to 18 cents in May 1929, where it was pegged for a full year, notwithstanding the drastic reduction in demand following the October panic.

With copper flooding into the market from the new mines of Rhodesia, which at first were not associated with Copper Exporters, Inc., and with consumption slackening rapidly, the cartel could not hold the line on prices. Copper sank to a low of 5 cents a pound by the end of 1932, despite rigorous production-curtailment programs, world-wide in scope, engineered by the cartel in 1930 and 1931.[45] The inability of the cartel members to agree on their proportionate shares in further output reductions finally led to abandonment of the whole scheme in December 1932.

### *A New Deal in Copper Cartelization*

During the next two years, American copper producers, favored by a duty of 4 cents a pound in the Revenue Act of 1932 and by the NRA code, gradually raised domestic prices to 9 cents a pound, delivered.[46] Though 9 cents for copper probably covered costs of all the big companies and even of the majority of domestic producers, those chiefly dependent on export trade had a special interest in the resumption of cartel controls.[47] Late in 1934 copper was selling in European markets for about 2.5 cents a pound less than in the United States. So, when the European companies controlling the African mines sought a new agreement in December 1934, Kenne-

45. *Ibid.*, pp. 13206-11. The Copper Institute, a statistical reporting agency formed by the producers in 1926 when they established Copper Exporters, Inc., was the medium through which these arrangements were initiated, as it had a wider membership than the export association. On the relation of the Institute to the curtailment programs, C. F. Kelly, President of Anaconda and Chairman of Copper Exporters, Inc., testified before TNEC that: "The Copper Institute was the only organization in the industry, and the first meeting that was held was called under its auspices, but inasmuch as the question of production was foreign to its purpose—if I remember, I think we simply recited something and then adjourned. Then we met informally as copper producers rather than members of the Institute . . . I merely say that because we did want *to keep the Copper Institute clean* as a statistical organization." *Ibid.*, p. 13206. Italics supplied.

46. On the significance of the imposition of a tariff on a metal of which the United States had always been a net exporter, see Elliott, *et al.*, *op. cit.*, pp. 476 ff.

47. Kennecott and Anaconda with their extensive South American mining properties were the principal American exporters. Since these companies could not import their foreign-mined copper into the United States for domestic consumption, because of the prohibitive 4 cent tariff, they had to find a market abroad for this important part of their output. They still imported South American copper matte and blister, but only in bond, for refining. On re-exportation this copper met the competition of South African and Canadian exports in world markets. *Ibid.*, p. 478.

cott and Anaconda welcomed their cooperation, and in May 1935 all the major copper exporters except the Canadian joined in a new agreement.[48]

In contrast to its predecessor, the cartel formed in 1935 regulated the market through control of production rather than through price fixing. The basic strategy, however, remained the same. For two years the cartel kept output well below the rising rate of consumption, and succeeded in reducing world stocks by about one third. As stocks dwindled and demand increased, prices stiffened. In the first two years of the cartel, the London price, which reflected cartel output and export restrictions more directly than the New York price, rose more than 150 per cent. But the New York export price, which reached 16.6 cents a pound in March 1937, was not far behind.

Speculation in copper, stimulated by the threat of war and insistent demand from the armament industries, undoubtedly helped the rise. But the cartel strategy of restricting supplies, which continued to the end of 1936 despite a portentous depletion of stocks, was without doubt the major factor behind the runaway market in the spring of 1937. With general business recession developing late in the winter of 1937–1938, copper prices reacted and the cartel reimposed quota restrictions. From January 1938 until the outbreak of World War II export prices of copper remained steady at the 10 to 12 cents a pound level.

### *Price Results of Copper Cartels*

The price record of copper under cartel controls reveals two outstanding characteristics. The first is the great range of the price

48. TNEC Hearings, Pt. XXV, pp. 13230-52. Though the "Recital" prefacing the memorandum of agreement excluded the United States from its restrictive provisions, E. T. Stannard, President of Kennecott, testified before the TNEC that in negotiating the agreement he had told the European members that, as for his company, "our general policy probably would be not to export very much copper in the near future." *Ibid.*, p. 13232.

Actually, Kennecott's exports from the United States, which had been running at an average rate of 3,108 tons a month in the year before the formation of the cartel, declined to only 437 tons in June 1935, the first month of cartel operation. During the next three years, to July 1938, Kennecott exported not a single pound of duty-free copper. *Ibid.*, p. 13537.

Total United States exports declined during this period to a rate of about 35 per cent of the average monthly rate in the year before the cartel. The sharp decline in United States exports contrasts with the steady growth of production and the rising rate of general business activity during the same years. These developments are difficult to reconcile with the cartel's announced aim of regulating copper markets solely "outside the United States."

fluctuations. Unquestionably the gyrations of copper in recent decades are largely traceable to the strategy of the successive cartels in boosting prices to what the traffic would bear. These exaggerated price increases have undoubtedly helped bring about an unintended result: expansion of productive capacity in new, unregulated fields. As an eminent technical expert, a mining engineer, testified before TNEC:

> . . . extraordinary concentration of ownership . . . has not prevented the industry from suffering wide fluctuations in earning power and employment. This is strikingly illustrated by the fact that the securities of a group of American-owned companies [20 leading producers] in North and South America which produced 60 per cent of the world's total output during the 12-year cycle from . . . 1921 to 1932 . . . were valued in the open market in 1921 at $700,000,000, at the highs of 1929 at $3,350,000,000, and at the lows of 1932 at $222,000,000 . . . Employment showed similar wide fluctuations. . . .
>
> Such changes in the conditions of the employees and owners of the copper industry point directly to the pursuit of policies tending to accentuate the cyclic character of the industry rather than to mitigate it. . . . Repeatedly, policies appear to have been based on the theory that the world must have copper regardless of price. . . . These pools . . . were temporarily successful in raising prices and profits to high levels. Inevitably, however, the structure crumbled away. . . . The causal relations between these pools and the speed of development of various important additions to known supplies . . . can readily be traced . . . [of domestic "porphyries"—low-grade copper ores—in the early years of the century; later, of the South American "porphyries"; and more recently, of the Rhodesian and Canadian deposits].
>
> The financial history of the copper industry strongly suggests that up to date there has been one element of marked stability . . . In spite of wide fluctuations over brief intervals, the tendency has been for [the rate of profit] to return to a normal . . . As can be seen, all attempts to exact profits in excess of the normal have at the best succeeded only temporarily, to be followed by prolonged periods of depression and slow recovery, which brought the average back to normal . . . Under the probable conditions of the future, continuation of those policies of the past, in which price maintenance has been the keynote, cannot fail to bring greater troughs of unemployment and greater loss of earnings and capital than have yet been experienced.[49]

The second outstanding characteristic of cartel-controlled prices of copper is their apparent independence of costs. Accurate determination of costs is even more than ordinarily difficult in the case of

49. *Ibid.*, pp. 13547-49.

copper, as most of it is produced jointly with other nonferrous metals. Nevertheless, certain long-run cost tendencies are evident. A. B. Parsons, a recognized authority on the industry, has estimated that the actual cost of producing copper from a large-scale domestic porphyry mine under typical conditions in 1929–1930 averaged 6.06 cents a pound.[50] He estimated that the average cost of production from the same ore body would have been 12.70 cents a pound if the copper had been mined, smelted, and refined by the best techniques known before World War I but with wages and supply costs at 1929–1930 levels. In other words, technical improvements in fifteen years had halved costs. Notman estimated that in the thirties the average cost of production was further reduced about 1.5 or 2 cents a pound.[51]

With extensive development of low-cost production in South America, Africa, and Canada since World War I, it seems safe to estimate the decline in average unit costs at not less than 50 per cent. Yet in 1939 the average price of copper in New York, about 12 cents a pound, was only about one cent less than the 1914 average.[52] A quarter century of great technical progress had brought a trifling gain to copper consumers.

### *Price Results of Tungsten Carbide Cartel*

The record of copper cartels is not exceptional. On the contrary, copper price movements in the past quarter century are fairly typical

50. A. B. Parsons, *The Porphyry Coppers*, American Institute of Mining and Metallurgical Engineers, New York, 1933, pp. 13-16 and Chap. 4. Arthur Notman, another well-known mining engineer, testifying before TNEC, referred to these estimates by Parsons and identified the "typical" large-scale producer as Utah Copper Company, a subsidiary of Kennecott. TNEC Hearings, Pt. XXV, pp. 13288-89. If Notman is right in saying that Parsons' figures refer to Utah, then Parsons' cost estimates, though they may fairly reflect Utah's unit cost under normal working conditions, are hardly "typical" of the industry as a whole. For Kennecott's Utah ranks as one of the lowest-cost domestic producers. *Ibid.*, p. 13500.

The Tariff Commission's study of average costs in the domestic copper industry seems to support Notman's assumption that Parsons based his estimates on Kennecott's Utah operations. The Commission estimated that the average cost of domestic production in 1928 was 10.27 cents a pound, and that 26 per cent of the total output was produced for less than 8 cents a pound. *Ibid.*, p. 13475.

51. TNEC Hearings, Pt. XXV, p. 13286.

52. *Ibid.*, pp. 13395-99. A comparison of single years a quarter century apart is seldom a reliable basis for estimating a trend, but in this case it does not mislead. The average level of copper prices in the three years before World War II compared with that of a like period before World War I shows a like differential of about a cent. Moreover, eliminating the wartime upward bulge of copper prices and the downward depression bulge of the early thirties, the secular trend line is very nearly horizontal. See *ibid.*, chart of copper prices, 1912–1939, facing p. 13394.

of the results of cartel schemes. The extraordinary examples of cartel price manipulation are not to be found in such staples as copper, aluminum, iron and steel. It is the specialties, like cemented tungsten carbide, that show what an enterprising cartel can do with prices when unhampered by fear of competition.

The Krupp Steel Works of Germany first developed tungsten carbide, an alloy of diamond-like hardness used on the cutting edges of high-speed machine tools.[53] Krupp sold it in the United States in 1927 for $50 a pound. General Electric, however, had developed a comparable tungsten alloy which it called Carboloy, on which it held basic American patents. Using these patents as a bargaining lever, General Electric made a cartel agreement with Krupp in 1928 whereby it obtained exclusive control over the United States market.[54] Then the price of cemented tungsten carbide jumped to $453 a pound for most buyers, with a few favored customers paying $360 a pound.[55]

This price increase of 800 per cent brought the market value of tungsten carbide to 1.5 times the value of gold. The price of $453 a pound remained unchanged, for ordinary purchasers, until October 1936, when it was reduced, after an amendment of the cartel agreement, to $225 a pound. This was about the price favored customers paid after 1931. Krupp continued during these years to sell the same commodity in Europe for $45 to $50 a pound. The result was that Krupp's *monthly* sales of tungsten carbide to European machine-tool industries exceeded General Electric's *annual* sales of the same material, in spite of the much larger potential market on this side of the Atlantic.

The price restriction on the American development of tungsten carbide stirred up some controversy inside the General Electric organization itself. In 1931, an engineer at the Schenectady Works

53. For the full tungsten carbide story, see Bone, Pt. I, pp. 59-121.

54. Apparently Krupp retained some limitations on General Electric's price policy not expressly set out in the agreement. Zay Jeffries, president of the Carboloy Company, stated on June 28, 1938: "The artificialities represented by price control have retarded the use of carbide on many large-volume applications. Agreements with Krupp made it impossible to remove the artificialities . . ." *Ibid.*, p. 97.

55. These prices covered, in addition to the tungsten carbide delivered, certain services rendered the buyer by the Carboloy Company in adapting the material to his specific needs. It does not appear whether these services were more extensive than those ordinarily performed by a seller introducing a new product, or than those which Krupp rendered its customers in Europe. *Ibid.*, pp. 478 ff.

who had charge of making the material for use in General Electric's own shops protested against the high-price policy. He declared that "manufacturing cost . . . is $8 per pound, and this is just as good tungsten carbide as is being made by anybody in North America or Europe . . . This shows the absurdity of trying to maintain the prices which we have evidently committed ourselves to, or perhaps others have committed us to."[56] Pointing out that General Electric shops used more than twice as much tungsten carbide as the Carboloy Company was able to sell, at its "absurdly" wide profit margin, to all other machine shops in the United States, he said:

> . . . none of the above mentioned concerns includes machining of steel in its category. They simply advise their customers that carboloy is not suitable and cannot be used on steel. About 60% of all our applications in the Schenectady plant have been and are on the machining of various steels . . . Now the principal reason for these various vendors not selling their tools for machining steel which is such an important item in the machine-shop industry today is that the prices they have to maintain for the carboloy [do] not allow them to put on carboloy enough to stand machining operations on steel. . . . With the absurdly fictitious prices which are being maintained for carboloy tips, were they to put on enough of this material to machine steel, they would of course sell much less than they do at present, which to my way of thinking is just negligible . . .[57]

Even after the 1936 price reduction of 50 per cent, the American price was still two to four times as much as the German price, depending on the quantity discount. The service charges that formed part of the price General Electric's customers paid for tungsten carbide could hardly account for the entire difference between American and German prices.[58] An antitrust indictment in 1941 and the increasing need for this material in the National Defense Program finally broke the bottleneck of cartel restriction.[59] Prices dropped promptly. By April 1942 the OPA had set ceiling prices ranging,

56. *Ibid.*, pp. 94-95.
57. *Ibid.*, p. 386.
58. See footnote 55. The record does not show whether the German prices also included a cost-of-service element.
59. See *Scientific and Technical Mobilization*, Subcommittee of the Committee on Military Affairs, U.S. Senate, 78th Cong., 1st sess., Hearings pursuant to S.Res. 107 and S. 702, Pt. IV, Ex. 128, pp. 328-74. (These hearings will hereinafter be cited: Kilgore, Pt. —.) The first indictment in this case, *U.S.* v. *General Electric Co., et al.*, was returned on August 30, 1940, in U.S. District Court for the Southern District of New York; the second indictment, October 21, 1941. The trial of this case took place during the summer of 1947, but the court was not expected to hand down its decision before January 1, 1948.

according to quantity purchased, from $24.21 to $45.36 a pound.[60]

The final astonishing fact about this bizarre episode is that the patents on which the cartel was based were invalid from the beginning. In 1940, a few months before the expiration of the basic patents, a federal court held that none of them, neither those which General Electric itself developed nor those under which it acquired American rights from Krupp, disclosed any patentable novelty.[61] Though all these pooled patents were void, they served for twelve years as a lever to keep the price of tungsten carbide at an extortionate level.

The history of tungsten carbide gives an exaggerated impression of the power of cartels, but it shows the dominant thrust of private cartel arrangements. Few cartels, it is true, are so tightly organized that they can jack up prices to such fantastic heights as did the tungsten carbide cartel. To the extent of its power, however, every voluntary cartel has a strong incentive to get the largest immediate earnings by restricting output and raising prices. But the experience of the copper cartel emphasizes the limitations on cartel price strategy. Copper probably reflects more accurately than tungsten carbide the general outcome of cartel pricing arrangements.

### *Other Evidence of Cartel Tendency to Boost Prices*

Only a comprehensive statistical study could reveal in detail the effects of cartels on costs, prices, and cost-price relationships. But adequate data are not available. More revealing than any statistical evidence of the general tendency of cartels to raise or to keep up prices is the persistence of attempts to maintain and reinforce cartel controls wherever they have been introduced. The repeated re-establishment of concerted restrictive policies, as in copper, nitrates, aluminum, rubber, zinc, explosives, coffee, tin, and steel, even in the face of recurrent breakdowns or discouraging setbacks from time to time, suggests that the business interests concerned must at least have found these experiments promising of success in garnering larger profits. Hardheaded businessmen do not take the risks in-

60. Yet these government-fixed prices did not reduce production. In the spring of 1942 Carboloy's rate of output was 66,000 pounds a month, more than 100 times higher than four years earlier (650 pounds a month). Bone, Pt. I, p. 45.

61. *General Electric Co.* v. *Industrial Diamond Co.*, 33 Fed.Supp. 969 (1940). General Electric did not appeal this decision. Bone, Pt. I, p. 63.

volved in making commitments with their natural rivals without reasonable assurance of getting some concrete, even if temporary, benefits. The president of the National Lead Company expressed this view clearly in discussing the purpose of the titanium pigment cartel, in the formation and management of which his company played a leading role.

> May I call the proposed combination, for simplicity, a cartel? The whole purpose of the cartel is to obtain a monopoly of patents, so that no one can manufacture it [titanium] excepting the members of the cartel, and so can raise the prices by reason of such monopoly to a point that would give us much more profit on our present tonnage, but also prevent a growth in tonnage that would interfere with their greater profits in lithopone.[62]

Under American public policy the legal risks of cartel engagements are formidable, yet American companies have become associated with international cartel ventures directly or indirectly in a large number of industries. In any country, a businessman takes a big risk in restricting his output, limiting his sales territories, curtailing his plant capacity, pooling his patents or profits, in return for the same sort of self-denying ordinance by his competitors. For while all members of the group may profit by acting in unison, each can profit still more by secretly violating his commitments to the others. In practice, the temptation to do so is strong even though a firm may hesitate to go to extremes for fear of retaliation. Hence it is not strange that cartels frequently break up, or go through reorganization, after an internal crisis. In a large proportion of these cases, defection of some member is the cause. A period of bitter competition often ensues.

Adherence to a cartel undoubtedly involves genuine business risks. In view of these hazards the pertinacity with which businessmen in industry after industry continue to support cartels raises a strong presumption that organized restriction must, on the whole, promise to be effective. If cartels did not have a general tendency, at least over the short term, to raise prices and improve profits, businessmen would not waste their time on them. As an American executive of the steel cartel said, "of course, under the cartels the prices were

62. *U.S.* v. *National Lead Co.*, 63 Fed.Supp. 513, 522-23 (1945). Cf. *Canada and International Cartels,* Report of the Commissioner, Combines Investigation Act, Department of Justice, Ottawa, 1945, p. 16. For details on National Lead's (and du Pont's) relationship to the titanium cartel, see Kilgore, Pt. VII, pp. 959-80.

good, otherwise there wouldn't be any good reason to have a cartel."[63]

## *Cartels as Promoters of Price Rigidity*

Not only do cartels tend to raise prices, but they tend to hold them as high as possible for as long as possible. This is the inward meaning of the much-discussed "stabilization" policies of cartels. In their attempts to maximize profits, however, some cartels take a longer view than others. Some, for example, fix a price high enough to assure a profit even when producers are operating at the minimum rate of output contemplated under the most adverse foreseeable business conditions. They adhere to this fixed price even in periods when a higher price might temporarily increase their profits.

The cartels that base their pricing policy on such long-term views are comparatively rare. Most cartels prefer to make hay while the sun shines. Though they try to support prices during slack periods, they do not hesitate to advance them in busy periods up to the point at which a reduced volume of sales would impair profits.

In general, those cartels taking the long-run view are those that come closest to attaining genuine monopoly.[64] If a cartel must consider the possibility that new sources of supply will be developed or that some members of the cartel will renounce their commitments and follow an independent course, it is more likely to adjust prices periodically in response to changes in general business conditions. In this way it can more effectively discourage the development of competitive threats and more effectively maintain centralized control of the market. To the extent, however, that cartel members have a sufficiently strong monopoly and are able to discount alternative sources of supply, they can and do fix prices that will maximize profits over a long period.

## *Cartel Price Rigidity Depends on Blocking New Producers*

Several factors contribute to the confidence of strongly entrenched concerns in their ability to keep nonmember sources of supply from developing or expanding in response to the profit opportunities created by cartel-fixed prices. The most important barrier to entrance

63. TNEC Hearings, Pt. XX, *Iron and Steel Industry,* p. 10962.
64. For evidence in support of this view, see the discussion of the relation of cartels to business stability in Chapter 7.

of new producers is technology. In modern manufacturing, technology has become so complex that it requires years of experimentation and experience to master it. Knowledge of technical formulas is not enough. Continued practice is necessary to translate these formulas into smooth productive operations. The costs of learning the game would be a formidable barrier to new enterprise even if no patents blocked the way.

When the majority of established concerns in an industry pool their patented techniques the obstacles to newcomers become nearly prohibitive. It may make little difference in practice whether the patents are valid or not—witness the case of tungsten carbide. The costs of litigation are so heavy that few new enterprises can hope to survive the legal challenge to their right to do business in a field covered by a network of cartel-controlled patents. Even if a new firm succeeds in meeting the challenge it cannot hope to reap more than a small fraction of the potential benefits. Once a newcomer has broken a patent blockade, still newer enterprises may enter the field unencumbered.

Heavy requirements of fixed capital also enable established cartel members to follow a price policy in disregard of potential competition. For example, to start an integrated aluminum enterprise of an economical size requires a dependable source of supply of bauxite, of hydroelectric power, and of supplementary materials, along with extensive equipment for converting these into metal. Funds of at least $25 million are called for to cover the initial investment—a sum not easily raised for investment even in an industry with as favorable profit prospects as aluminum.

The commercial value of trade-marks, brands, and good will is a third factor favoring the cartelized concerns. In modern markets—nation-wide and even world-wide—the role of personal relationships in trade has steadily dwindled. Commerce and industry have been progressively depersonalized. They have also come more and more under the sway of habit, particularly at the retail level. For this, modern advertising is chiefly responsible. Improvement in communications has facilitated this displacement of the personal touch in market transactions by instilling buying habits based on suggestion, fear, flattery, curiosity, and other human motives that the wiles of salesmanship have nurtured so skillfully in our times.

The intangible assets built up by advertising are among the most valuable of modern business enterprise. Without them a new enterprise in the consumer goods field has small chance of surviving. To develop good will on an impersonal basis requires time and money —money in enormous amounts. To change buying habits, or even to modify them, takes ingenuity and perhaps a bit of luck. For a newcomer to break into a cartelized industry nowadays, he must do more than offer as good a product as the cartel members are offering, at the same or at a lower price. He has to sell the public on what he has to offer.

*Practice of Price Discrimination*

Arbitrary differences in prices to different buyers are common under cartel controls. Sometimes price disparities result from differences in the degree of cartel control in different sectors of the market. The domestic market, for example, may be more firmly controlled than the foreign. In the course of their dealings with those abroad, cartel members in one country may have to make big concessions in order to reserve exclusive rights in the home market. These concessions may allow such liberal quotas for each national group in certain foreign markets that exports to them can command only relatively low prices.

In a sample study of pricing by American Webb-Pomerene associations, many of which were integral parts of cartels, TNEC investigators found that the jointly established export prices were lower than the members' domestic prices (supposedly determined independently) in forty-six cases out of seventy-six.[65] The majority of these organized exporting groups were not necessarily dumping their products abroad. Most of them merely found it profitable to charge higher prices in their comparatively rich domestic markets (protected by cartel agreements or a tariff wall, or both) than in the comparatively poor foreign markets. Presumably they were charging what the traffic would bear both at home and abroad, but the sales resistance to high prices was greater abroad.[66]

65. *Export Prices and Export Cartels*, TNEC Monograph No. 6, Washington, 1940, p. 31.

66. As the authors of the TNEC study suggest, monopolistic competition probably prevailed in most industries that sold abroad for lower prices. *Ibid.*, pp. 74-84. Presumably trade-marks and advertisement-cultivated good will were more effective at home than abroad in protecting a business from competition based on lower prices.

Sometimes price differentials reflect wide disparities in the bargaining power of buyers. A large buyer may even be in position to produce his own requirements unless he gets a substantial concession. The sulphuric acid market is a good example. From 1928 to 1937, the regular price quoted to ordinary domestic buyers remained unchanged at $16.63 a ton; in 1937 the annual average rose to $17.21 a ton.[67] But the highest annual average price paid during this period by one large favored domestic buyer was $15.73 in 1928, the lowest $12.18 in 1930. This favored buyer had an average advantage in the purchase of his acid supplies, for the entire period, of $3.25 a ton over buyers who paid the quoted price.[68]

### *Price Discrimination Reinforces Cartels*

The maintenance of good will among the cartel associates themselves is a common reason for price discrimination. In the chemical industries purchases and sales among the big and little producers take place continually. Often a company purchases material at a price equal to, or lower than, the cost of producing the material on its own account. And the seller gets the advantage of keeping the buyer from developing itself as a supplier to the general market.

From the summer of 1937 to the summer of 1941 Standard Alcohol, subsidiary of Standard Oil of New Jersey, bought most of its methanol for antifreeze mixtures from du Pont.[69] Most of the time the price was 17.5 cents a gallon—7.5 cents less than Standard estimated it could get its supplies from any other source, and 12.5 to 15.5 cents less than general market prices of methanol in tank car lots. Standard bought about 7 million gallons at this price, saving

67. *Price Behavior and Business Policy,* TNEC Monograph No. 1, Washington, 1940, p. 99.

No single cartel agreement covers the American sulphuric acid industry. But Kreps concludes that the producers nevertheless effectively control the market. He states: "Intercorporate stock ownership, interlocking directorates, cross-licensing arrangements, exclusive purchase and sales agreements—these are only a few of the devices whereby producers tried to make sure of raw materials or other essential supplies and sought to give a degree of permanence and predictability to their market . . . Financial and commodity *haute politique,* fought with such weapons as . . . patents and threat of producing . . . by-products, has proximately determined not only price but even demand and supply." Theodore J. Kreps, *The Economics of the Sulphuric Acid Industry,* Stanford University Press, Stanford University, 1937, p. 200.

68. The authors of *Price Behavior and Business Policy* say (p. 99) that sometimes the trade made concessions to all buyers and not only to selected customers. It is not clear whether these occasional general concessions were uniform or at different rates.

69. Bone, Pt. VIII, pp. 4599-604.

about a million dollars on the cost of the same quantity to other antifreeze manufacturers.

Standard, however, held American rights to an IG process for synthetic methanol. Standard took the position, in bargaining with du Pont, "that if they [du Pont] are willing to give us supplies at price level not showing satisfactory return on our investment we will take from them. They seem entirely satisfied with our position." [70] Eventually the demands of the National Defense Program for nitric acid for explosives led du Pont to convert its methanol facilities to the production of ammonia. It could then no longer supply Standard. Standard thereupon built a plant to meet its own needs.[71]

The terms on which Dow Chemical Company supplied Alcoa and its subsidiaries with magnesium ingots provide another instance of price discrimination in transactions between cartel-affiliated companies. From 1927, when Alcoa stopped competing with Dow in magnesium production and began buying all its magnesium from Dow, until the summer of 1931, when Dow's relation to Alcoa became uncertain because of the Alig agreement, Dow gave Alcoa a discount ranging from 20 to 30 cents a pound.[72] The prices to Alcoa were 30 to 40 per cent lower than those quoted to Dow's other domestic customers. For twenty-one months after August 1931, or until Dow's relation to the cartel had become clarified, its prices

70. *Ibid.*, p. 4647. The quoted passage is from a cablegram of November 16, 1936, from Frank Howard to W. R. Carlisle. To spell out its meaning: if du Pont is willing to sell at a price so low that Standard could not, in competing, show an adequate return on the process for which it held American rights, then the offer of du Pont should be accepted. To du Pont this made sense. Standard, in short, got a very low price by holding a club over du Pont's head. Standard continued to use the same tactics effectively. Just after concluding the negotiations for the 1940 contract, M. B. Hopkins wrote J. W. Casterton (both Standard officials): "As you know, it has been our policy to obtain protection by contract sufficiently in advance to permit time to construct a plant in case du Pont decides not to continue to give us favorable terms." *Ibid.*, p. 4665.

Actually, Standard's agreement with IG prevented it from building a methanol plant "without first discussing it with du Pont." The explanation of IG's reservation lies in its commitments under various other cartel agreements with du Pont. Thus, for a time, IG kept both of its principal American collaborators happy: Standard got its alcohol at a special low price; du Pont kept Standard out of the methanol industry and "stabilized" the domestic market.

71. *Ibid.*, p. 4602. Standard did not limit itself to a capacity adequate to meet its own methanol needs. It built a plant with a capacity of 6 million gallons a year, about double its current methanol consumption.

72. See *Investigation of the National Defense Program*, Hearings before a Special Committee of the U.S. Senate, 78th Cong., 2d sess., pursuant to S.Res. 6, Pt. XXIV, Ex. 1177, p. 10720. See also *Cartels in Action*, Table 25, p. 282.

to Alcoa were never more than 2 cents a pound below its prices in the general market. For the next nine years, from the middle of 1933 to the spring of 1942, when a government antitrust decree broke up the cartel,[73] Alcoa's discount from Dow's quoted prices was never less than 8 cents a pound and the average differential was 9.6 cents a pound. The average price differential for the whole period was about 28 per cent.

Of course, such a discriminatory price policy prevented competition in the fabrication of magnesium products and the compounding of aluminum alloys, in which magnesium is usually an important component. Differentials of this size are greater than those ordinarily given on the ground of savings in handling large orders. After the dissolution of the cartel pursuant to the consent decree in the antitrust action, Alcoa got its metal from Dow, in 1943, under OPA pricing regulations, at an average price just 1.11 cents a pound, or 5 per cent, below the regular price. As the average size of other domestic customers' orders was smaller than Alcoa's, this differential appears reasonable in the light of common commercial practice.

### *Summary of Cartel Influence on Costs and Prices*

Cartels are a business phenomenon. They are business expedients for business purposes. They tend to raise or support particular prices and so to increase profits or reduce losses of their members. They may also improve technical efficiency and reduce production costs—but only in so far as the cartelized firms stand to gain. Effective market control requires industry-wide cartel participation. This means that the vested interests of high-cost producers must be bolstered. The price of unity is some tolerance of wasteful methods of production, some solicitude for the economic misfits and weak sisters. Cost reduction is not a common and characteristic tendency of cartel operations, because businessmen, like other people, generally prefer the line of least resistance. It is easier for firms to make

73. On January 30, 1941 a federal grand jury returned two indictments under the antitrust laws against members of the magnesium combination: *U.S.* v. *The Dow Chemical Co., et al.,* and *U.S.* v. *American Magnesium Corp., et al.,* respectively Criminal Action No. 109-191 and No. 109-190, in U.S. District Court for the Southern District of New York. On April 15, 1942 the Attorney General filed a civil complaint in the same jurisdiction against substantially the same parties: *U.S.* v. *Aluminum Company of America, et al.,* Civil Action No. 18-31. The principal defendants pleaded *nolo contendere* to the indictments and paid fines on April 15, 1942. Thereupon the court entered a consent decree in the civil action.

profits, and to make them more secure, by boosting prices in unison than by reducing costs either together or independently.

Cartels tend also to stabilize their own markets. They tend to bring pricing under central control. And price making by a business bureaucracy is not very different from price making by a political bureaucracy. Procedures are necessarily by administrative rule, and precedent becomes ever more important. Cartel-regulated prices tend, therefore, to be rigid. Their inflexibility, far from making the economy as a whole more stable or ironing out business fluctuations, probably aggravates instability. Instead of averting or correcting economic maladjustments, cartels tend to freeze bad situations such as overexpansion and to promote new evils such as underinvestment. In stabilizing specific prices, cartels paradoxically tend to foster economic imbalance and to make the price system erratic.

Finally, cartels tend to practice price discrimination. Some buyers are able, and willing if they must, to pay more for a product than others. To make all potential buyers pay as much as those whose demand is most pressing would be to cut off the patronage of those who are less able to pay, or who, at the high price, prefer some other product. In a cartel-controlled market it is not necessary to forego profits from sales to either class of buyers. In the same way international cartels cannot afford to overlook differences in purchasing power and strength of consumer demand among different countries or regions. Price differentiation is especially marked as between home markets reserved to particular cartel members and foreign markets exploited jointly, supplied under a quota system, or perhaps even used as a common dumping ground.

Furthermore, price discrimination often arises out of business dealings among cartel members themselves. The offer of special, low prices to affiliated concerns is an effective way of promoting trade solidarity. Discrimination is also used to prevent competition from allied or closely related industries.

All these cartel practices are, of course, far from consistent with the principles of "a fair field and no favors" and of "equal opportunity for all," which are the bedrock of a private enterprise economic system. In view of the widespread development of cartels it might be argued that the free-enterprise system is a thing of the past, that free enterprise has become an increasingly empty slogan. Many

strong advocates of free enterprise have practiced one kind of collectivism as cartel members—business collectivism. They have not lived up to their professions. To get rid of the vices of a competitive economic order—its speculative risks and insecurity—by suppressing its virtues of spontaneity and flexibility is hardly the way to preserve it. Whether a private enterprise system that is not competitive can long endure is at least doubtful.

## Chapter 5

# CARTELS AS INSTRUMENTS OF ECONOMIC CONTROL

FOR a century and a half, from the beginning of the Industrial Revolution up to World War I, the Western world relied mainly on competition as the organizing force and the free market as the medium for directing economic activity. During the past fifty years, however, and particularly since World War I, producers have been increasingly unwilling to risk their fortunes in competitive enterprise. They have not been willing to abandon private enterprise, but they have contrived to make it less free. While insisting that the rewards of business go to private owners, they have sought to escape or temper business risks. They have turned to joint or unified producer controls—cartels—as a means of lessening the hazards of private enterprise and escaping the costs of economic readjustments necessitated by unforeseen changes in market conditions—for which the producers themselves may or may not be responsible. They have frequently had the support of their governments.

The significant fact about cartel development is that it diminishes competition. Cartels have introduced new criteria and new methods of control. The thrust of cartel development has been toward substituting the private council table for the market as the forum for reconciling or coordinating the policies of producers. This has frequently served well the interests of specific groups of quasi competitors, but it has not solved the fundamental problem of industrial maladjustment. It has not brought about economic balance and the full use of productive resources. To grasp the significance of the increasing displacement of competitive markets by cartels, a summary of the economic functions that a free society depends on competition to perform should be useful to the nonspecialist.

*Rationale of Free Competition*

Measured against man's wants, goods in general are always in short supply. Otherwise neither society nor individuals would have any economic problem. But it is equally true and significant that more than enough of any particular good is always a possibility. From either point of view, economizing is essential. Hence productive agents must be husbanded, that is, employed where they will yield the most value. For the same reason—to avoid waste—it is necessary to husband finished commodities, that is, use them to the best advantage. Men differ on what lines of production do "yield the most value" and where lies the greatest advantage in the use of a particular stock of consumable goods. Private enterprise economies resolve these issues in a different way from communist societies. But no society can escape the necessity of husbanding its productive resources and the goods it produces.

However a nation conceives economy or defines waste, it must have some system for promoting the one and checking the other. The basic functions of such a system are: (1) to allocate productive resources—land, labor, capital, management—among the various uses to which they may be put; (2) to organize these resources in plants or other units to produce goods; (3) to apportion or ration among consumers the goods produced; and (4) to divide the resulting income (money or other tokens) among those whose resources have been used in the productive process. In a regime of private enterprise and free contract, a competitive market performs these functions—so the theory goes. In a communistic regime, a totalitarian dictatorship performs them, with no questions asked—so the theory goes. In practice, private monopolies or the state itself may severely restrict competitive forces in a society that nominally depends on free markets to direct and control economic activities. Similarly, in practice the power of decision of a communist party hierarchy may be greatly qualified; the officials may have to make concessions to workers' recalcitrance or consumers' discontent.

Modification or displacement of the accredited system of industrial control does not mean that its basic functions disappear. It means only their transfer to new organs of control. If monopoly

replaces competition in a private enterprise society, then Big Business or administrative organs of government (1) allocate resources, (2) organize production, (3) ration goods, and (4) divide the income. The development of cartels and monopolies signifies much more than an opportunity for a privileged group to exact tribute of consumers or to exploit workers. So, likewise, the institution of state enterprise or administrative regulation of business has wider implications than merely the prevention of consumer gouging. These developments mean that either special business interests or political agencies take over the economic functions that the competitive market is supposed to perform.

Since this transfer occurs piecemeal and sporadically, men frequently miss its significance. They fail to appreciate the vital interdependence of various parts of the economy and the far-reaching repercussions of administrative decisions that on their face may apply only to the operations of a few enterprises or a single industry. Competition tends to bring and keep the whole intricately intermeshed economy in balance. The relative prices of different goods and different productive agents are integrated through a sensitive price system that serves as a guide to businessmen in marshalling resources and to consumers in using their incomes. In so far as competition prevails, the businessman's quest for gain leads him to select the most promising fields for productive undertakings and to organize them efficiently. If a good is relatively scarce, the resultant large profits draw resources to its production, just as the high price repels consumers from purchasing it. If, on the other hand, a good is relatively overabundant, the resultant losses encourage retrenchment and the transfer of resources to more attractive fields, just as the low price acts as a magnet on consumer purchasing power.

Thus by a process of continual adaptation, competitive markets promote economic equilibrium. The whole complex of economic activities becomes an integrated system. Productive agents tend to be so distributed that none of them could earn more by shifting to the production of something else. Consumers trying to get the most for their money could not raise their standard of living by buying less of one good, for example movie tickets, and more of another, for example laundry services. The expression of consumer preference by voluntary bids in open markets establishes a basis on which enter-

prisers may make decisions economically.[1] Private enterprisers operating in competitive markets have a strong incentive to produce different kinds and qualities of goods in the proportions that consumers demand.

But competitive regulation of the employment of productive resources and the gratification of human wants is inherently speculative. Mistakes in judgment are bound to occur. Enterprisers cannot always forecast correctly what consumer preferences will be tomorrow—when the products resulting from business commitments they make today will reach the market. Consumers do not always know what they want; nor if they do know can they invariably find it. Poor decisions and bad choices tend to react on those who make them, and in a highly specialized and interdependent industrial system they also react adversely on others. In fact, they may derange the whole delicate system, upsetting the calculations of enterprisers and consumers in a long series of interconnected markets. Though competition promotes economic equilibrium in the long run, it also exposes a highly developed industrial system to the grave risk of periodic disequilibrium and stagnation.

Whether these cyclical disturbances are inescapable incidents of the competitive adjustment process—the price a free society pays for its freedom to experiment and grow—or avoidable accidents caused by obstructions to competition and leading to imbalances in the economy that have to be corrected is an open question.[2] But it is beyond dispute that the long-run balance of forces in a competitive economy gives it a strength and a capacity for growth that, on the record, no alternative system of industrial control yet tried has ex-

1. To "be economical," or to "economize," does not necessarily mean that the results are salutary according to every criterion of individual or social welfare.

To "economize" is simply to use the limited means at hand to the best advantage for the purpose in view. This signifies, first, that no end (*e.g.*, ownership of an automobile) for which a consumer uses his available means is less important to him than some alternative end (*e.g.*, having a home air-conditioning unit) for which he might use part of his means. Second, it signifies that he uses no more of his available means to serve any one of the ends chosen than are necessary for attaining that end. Subject to the necessary changes, these same observations apply to the community's use of its total economic means.

"Economizing" is thus strictly an equilibrium concept. It conveys no judgment whatever about the wisdom, virtue, or soundness of the ends that animate economic behavior. The concept of "economy" simply takes as given data the market appraisals of the things for which men work, sacrifice, and spend their income. It is a different concept from that of "real welfare."

2. See Chap. 7.

hibited. Through the instrumentality of a competitive market, resources tend to be allocated, productive processes organized, and income distributed in such a way as to yield consumers the maximum benefits possible under the current state of the industrial arts and with available natural resources.[3]

If competition did not allocate resources, organize production, and distribute income according to consumer preferences, cost-price relationships among the various industries would be out of line. This would prompt businessmen to redistribute productive resources, reorganize productive processes, or readjust income shares. Ultimately, competition would restore equilibrium.

*Factors Making for Disequilibrium*

Complete equilibrium is never realized in a dynamic society. Change is continual. Consumer tastes constantly undergo revision. The techniques of production are incessantly modified. Changes in demand even for nonessential consumer goods may be subject to caprice—for example, the meteoric rise and fall of demand for yo-yos, miniature golf courses, and Ouija boards. Although the demand for most goods is less erratic, changes continually occur in the willingness and ability of consumers to buy particular products.

Changes in demand are frequently associated with technological

3. In so far, of course, as the current distribution of purchasing power (*i.e.*, of income) permits the apparent relative intensity of the wants of different individuals for particular goods to be reflected in demands therefor in the market.

Critics of competition emphasize the great differences in income which it fosters and the resultant wide gulf in living standards between the poor and the rich. Most defenders of a competitive economic order frankly concede that the inequality of incomes that characterizes such a system in practice causes the most urgent wants of some individuals to go unsatisfied while the merest whims of others are indulged. Probably few of these defenders of competition would contend that the actual disparity of incomes even approximately reflects the differences in individual productivity, or contribution to community life. In the absence of such a correlation of income and productivity, the great differences in the extent to which individuals are able to satisfy their wants are hard to justify.

Defenders of competition have two answers to this criticism. The more practical among them contend that the social inequities of a free economy do not derive from the competitive process itself but from obstructions to it which an enlightened and vigorous public policy could remove. Cf. Henry C. Simons, *A Positive Program for Laissez Faire*, University of Chicago Press, Chicago, 1934. The more theoretical among them take refuge in the fact that the relative intensity of the wants of different individuals cannot be measured. They would readily agree that a child whose growth is being stunted by lack of adequate nourishment has a greater need for additional food than a socialite playboy has for some part at least, if not all, of the night-club entertainment he buys, but they would deny that we can ever know whether the child's hunger is a more intense feeling than the playboy's yearning for diversion.

innovation. The development of book matches greatly reduced the demand for conventional parlor matches—and perhaps even for the trousers on which they were struck! The pocket cigarette lighter later cut into the demand for book matches. While the automobile has not yet relegated horse-drawn vehicles to the museum, it has put most of them off the streets. Plastics have not supplanted glass, metal, and wood, but they have already affected the demand for them. Rayon has taken away from silk, cotton, and wool a large part of the textile market.

None of these changes was made without cost. Each bankrupted individual enterprises and some even eliminated entire industries. Though the automobile ruined many individual businesses, from livery stables to trolley lines, and depressed some industries, notably bicycle manufacture and railroads, the rising demands for metal, oil, rubber, and roads which accompanied the growth of automotive transportation acted as a tremendous expansive force on the economy as a whole. For every door of opportunity it closed, the automobile opened a score.

### *A Tough Case of Disequilibrium*

Technological advances and changes in demand do not always release expansive forces that make the necessary readjustments easy. During the twenties the American bituminous coal industry was continuously depressed, despite the buoyancy of general trade. Depression in coal was aggravated by war-expanded capacity, but it was rooted in declining demand. Fuel oil, natural gas, and hydroelectric power displaced coal in many uses. Simultaneously, improved techniques in utilization increased the yield of heat energy per ton of coal burned. To reduce costs, operators mechanized mines and thereby increased the industry's productive capacity. The changes in demand and improvements in technology made redundant a large part of the nation's coal-producing capacity. The result was widespread unemployment among coal miners, bankruptcy for many mine owners, and deep distress in coal-producing communities.

The crux of the troubles in coal lay in the disequilibrium between demand and supply. In the face of reduced demand, productive capacity increased even beyond previous requirements. Existing facili-

ties could produce more coal than could be sold at prices covering costs. Equilibrium could be re-established only by reducing unit costs or by reducing the labor and capital in coal mining.

Mine operators adopted both tactics. They reduced wages, laid off miners, wrote down capital values, closed mines. But in coal neither labor nor capital is very mobile. Coal miners are bound to the industry by skills, customs, habits, and tradition. In the isolated districts where coal is found, lack of readily available alternative jobs added to their difficulties in getting out of the industry. Nor did capital find egress from the industry easy. Investments in a coal mine are fixed and specialized to a unique degree. Bankruptcy may put an operator out of business, but it does not necessarily close his mine permanently. A successor is frequently at hand to take over where the bankrupt leaves off—with the advantage of a lower capital investment. Notwithstanding these obstacles, the industry substantially reduced capacity. Many mines were closed, some were abandoned. Many miners left the industry, often only to swell the ranks of the unemployed.

Demand for coal was further reduced after 1929 by the general shrinkage of purchasing power. When to the problem of a decline in demand was added the pressure of cyclical depression, the industry sought relief through collective controls. Operators in the most important coal-producing region of the country organized a joint selling agency—Appalachian Coals, Inc. This device received the blessing of the Supreme Court, but the associated operators soon turned to the more promising (because better implemented) program for "self-government in industry" that Congress had sanctioned—the NRA codes.[4] Under NRA and the National Labor Relations Act, the workers revitalized their union to reduce competition in the sale of labor.[5] The government underwrote the industry and union experiments in price and wage control, first by the NRA, then

4. *Appalachian Coals, Inc.*, v. *U.S.*, 288 U.S. 344 (1933). On the experience of the industry under its NRA code, see *Energy Resources and National Policy*, National Resources Committee, Washington, 1939; and L. S. Lyon and associates, *Government and Economic Life*, The Brookings Institution, Washington, 1940, Vol. II, Chap. 24.

5. See *The Effects of Labor Relations in the Bituminous Coal Industry on Interstate Commerce*, National Labor Relations Board, Washington, 1938, pp. 39 ff.; and F. E. Berquist and associates, "Economic Survey of the Bituminous Coal Industry Under Free Competition and Code Regulation," NRA Work Material No. 69, Vols. I and II, *passim*. The latter study is not published, but is available in mimeographed form in the National Archives, Washington.

by the 1935 Bituminous Coal Conservation Act,[6] and, after a major section of this act had been declared unconstitutional, by the Bituminous Coal Act of 1937.[7]

Under these special acts the government fixed a floor below which coal prices could not fall. The object was to keep prices above the levels to which competition would force them. The proponents of the legislation, including spokesmen for the miners and the operators, maintained that only in this way could the industry meet the country's fuel requirements profitably and pay living wages to miners.[8] The principles involved in the coal administration's policies can be briefly summarized. If the administration did not raise coal prices above the levels to which competition would force them, it was ineffective. If it did raise them above competitive levels, it curtailed the consumption of coal and retarded the movement of excessive resources out of this industry. In this case, it could only aggravate the industry's basic difficulties. It does not follow, of course, that the industry was worse off after control was established; but society was taxed to keep resources where they could not be economically employed.

### *Hardships From Economic Readjustments*

Restoring equilibrium by moving resources from lines of excess to lines of scarcity unfortunately meets serious obstacles and is rarely painless. At best, laborers may need to learn new skills or accept lower wages; they may have to migrate from one community to another; they may have to adjust themselves to a new way of life. At worst, they may have to endure unemployment, accompanied by hunger and other hardships for their families. Nor can capital, usually, switch from one industrial field to another without loss. Capital is not always fluid. When it is once invested in fixed and specialized forms a decline in demand for a product, or a tech-

6. 49 Stat.L. 991.

7. 50 Stat.L. 72. The 1935 act was invalidated by the decision in *Carter* v. *Carter Coal Co.*, 298 U.S. 238 (1936).

8. See, for example, *Stabilization of the Bituminous Coal Mining Industry*, Committee on Interstate Commerce, U.S. Senate, Hearings pursuant to S. 1417, 74th Cong., 1st sess., Washington, 1935.

The Brookings Institution study already cited concluded that the principal objective of price control of bituminous coal under the acts of 1935 and 1937 was "to protect the operators and workers from the results of market competition." See Lyon, *et al.*, *op. cit.*, p. 981.

nological innovation that increases supply, may depress its value or wipe it out entirely.

Readjustments are less disturbing the larger the area within which competition operates, the wider the market, the smaller the production units in relation to the market, the more varied the conditions of production, the more diversified the economy, and the more continuous the process of adjustment. But whether easy or difficult, painless or harrowing, readjustments are an inescapable price of economic progress. This is just as true of the most scrupulously planned economy as it is of a society in which economic arrangements are the outcome of a competitive process.

The human and financial costs of these readjustments may be distributed according to different patterns under different politico-economic regimes, or under the same politico-economic regime at different times after changes in public policy.[9] But as long as technology continues to advance, so long will some interests have to bear the costs of obsolescence and displacement which the introduction of new and better ways of making goods inevitably entails. As long as cheaper goods of the same quality, more attractive goods at the same price, and a wider variety of products are forthcoming, thanks to technological innovations, consumers' tastes will be subject to rapid change and the costs of shifting productive resources to meet novel demands will somehow have to be borne. With rising standards of living, moreover, demand tends to shift more frequently—and capriciously. It is possible to gauge demands based on fundamental human needs fairly accurately, but for tastes there is no accounting.

Advancing technology and changes in consumer wants inevitably hasten the obsolescence of productive facilities. They convert the marvels of today into the museum exhibits of tomorrow. They transform yesterday's waste products into today's resources. They neces-

9. Different patterns of readjustment-cost distribution under radically different regimes are illustrated by the contrast between burdens imposed on displaced cultivators by the Soviet's kulak liquidation program with the introduction of collectivized agriculture in the thirties, and the relief extended to dairymen, farmers, and stockmen by Australian and New Zealand marketing-board measures, when these groups in the same period were caught in the morass of a disrupted world market.

Different patterns of readjustment-cost distribution under basically the same regime, but with a reorientation of policy, are illustrated by the contrast between the Hoover administration's expedients for coping with the depression, with their emphasis on "letting the situation work itself out," and Roosevelt's New Deal program.

sitate the relocation of industry and may require mass migration of labor. Under their impact thriving communities may become ghost towns; deserts may be made to blossom. It is the task of a democratic society to see that the pains of economic innovation do not fall too heavily on a few and that its benefits are distributed to the many. But no society can prevent industrial dislocations except by preventing change.

### *When Is Technological Change Economical?*

Technological innovations disturb supply-demand relationships and upset the equilibrium among the complex of industries that make up an economy perhaps more often and more violently than do changes in consumer wants. Excessive plant capacity frequently comes about through such disturbances. Business will not ordinarily introduce new techniques unless they pay. A novel process must promise a total unit cost of production of the product that will be no higher than the price the article will bring in the market.

Assume that an industry is in equilibrium, that it makes one product, that someone devises a wholly new process for making the product, and that as this new technique is not adaptable to existing plants its introduction depends on some pioneering enterpriser. He will erect a plant, install the necessary equipment, and begin operations only if the total unit cost of production under the new process promises to be less than it is, so far as he can ascertain, under the old process.[10]

Resources would flow into such an industry as long as price exceeded total unit cost under the new process. But as output increased, prices would decline. Eventually they would sink below the out-of-pocket expenses per unit of output of the high-cost producers. High-cost producers would have no alternative but to close up shop. If the demand for the product were elastic, consumers might buy enough more of it at the lower prices to permit low-cost producers to absorb most or all of the labor displaced by the withdrawal of the high-cost producers.

10. We use the term "total unit cost" as it is used in the technical literature of economics. Total unit cost is made up of two elements, fixed costs and prime costs. Fixed costs—taxes, interest, insurance, etc.—do not change over a particular planning period as output varies. Prime costs—wages, materials, motive power, etc.—vary directly with changes in output over a planning period.

Whether or not this occurred, society would gain. It would get the product in question at a lower cost than previously. However, private producers may in the meantime have lost a large part of their capital, and labor may have been forced temporarily into idleness. Society may then have an obligation to relieve their distress. But it is not economical to give relief by prohibiting the cheaper process or by preventing its full utilization. To do either is merely to decide to favor the costly way in order to keep men busy. Such a procedure is on a par with other make-work programs; boondoggling in any form is wasteful.

### *Cartels and Economic Imbalance*

Producers have frequently resorted to cartels as a means of escaping the risks of economic readjustments. Cartels are sometimes, although not always, *Kinder der Not*—children of distress. As such, business groups, politicians, and some economists have often sought to justify them. They argue that the costs of competitive readjustments may be greater than labor or capital can bear.

In those countries in which economic liberalism is deeply rooted—particularly the United States—this contention has not always been convincing. But even here, where many regard the modern cartel movement as a menace to the system of free business enterprise, cartel programs for distressed industries have found strong support. While acknowledging the dangers of cartelization, economic planners and even hardheaded businessmen to whom "planning" is anathema have approved particular cartel programs. Like the sulfa drugs, cartels may be dangerous, they say, if resorted to indiscriminately, but may be a valuable remedy for economic ills if wisely administered. This viewpoint deserves careful, impartial analysis, not arbitrary dismissal.

When total unit cost under a new process is less than under the old but not less than the prime cost of the old process, it will pay a new enterprise to introduce the new process. The necessary additional resources will flow into the industry, output will expand, price will decline to the total unit cost of the more efficient producers. The old process although not economically obsolete is tech-

nologically outmoded,[11] and the high-cost producers must either find ways of reducing their total unit cost or withdraw from the industry. If they hire labor in a competitive market, so that a reduction of wages would reduce their labor supply, and if they have not the ingenuity to organize their operations more efficiently, writing down capital values may be their only recourse. Acceptance of a rate of return less than originally contemplated—and it boils down to that—is both in their own interest and in that of society.

Indeed, the situation offers no alternative unless these producers who have a vested interest in the outmoded process can contrive to ban the cheaper process. If the improved technique is introduced, not even a cartel scheme that vigorously restricts output and supports prices can insure the high-cost producers their previous rate of return unless the demand for the product is extremely inelastic. At the old price, no more can be sold than before the introduction of the new process; at higher prices, sales volume will usually decline. In either case, since the established producers using the outmoded process must share total sales with producers who have invested in the new process, they must operate at less than their optimum rate. Their total unit cost will increase, their earnings decline.

Consequently, high-cost producers are the ones most likely to resist the readjustments that technological innovation requires. They seek to escape the losses involved in scrapping their plants or writing down capital values, and to insure themselves a secure place in the market. But why should low-cost producers be willing to participate in such arrangements? The fact is, they are not always sympathetic to cartel strategy. When the Cuban sugar restriction program broke down in 1929, refusal of the low-cost Javanese producers to cooperate prevented the immediate development of a broader restrictive program. For many years the Dutch rubber growers, who had pioneered in many horticultural improvements, notably bud grafting, rejected British proposals for cooperation in their rubber restriction programs. Copper Exporters, Inc., collapsed in 1932 be-

11. As here used, a process is technologically outmoded when the total unit cost of the product—for an efficient producer using that process and counting the capital costs on a replacement basis—is higher than the total unit cost under an alternative process. A process becomes economically obsolete when the prime cost of the product made thereby is higher than the total unit cost under an improved process.

cause of the refusal of certain low-cost African producers to accept further reductions in their output quotas, and their continued insistence on a "preferred position" in export markets blocked the resumption of cartel control for several years.

But while low-cost producers have at times hesitated to join in cartel schemes to restrict output and raise prices, they have not always shown this independent attitude. In some instances they have taken the lead in forming cartels. Several factors explain their eventual adherence to these market-regulating schemes. Political pressure may impel them to climb on the band wagon. More generally, when a low-cost technique has once won for a producer a strong position in the market and further expansion at the expense of less efficient producers promises to be a slow process, he may look with favor on a cooperative arrangement which promises to fortify him in his position. He is more likely to adopt such an attitude if the pace of technological advance shows signs of slackening or the means of future technical improvements, such as research facilities, are largely under his control.[12]

Moreover, in industries undergoing radical structural transformations because of technological improvements, the risk of maintaining an independent position is great. The low-cost producer of today may easily be the high-cost producer of tomorrow. Business annals afford many instances of such displacement in efficiency, such as the startling eclipse of American Window Glass. Even a firm with a decided cost advantage at the moment may hesitate to engage in a competitive struggle with a formidable group of going concerns, organized for self-defense, when such a course promises immediate though not uniform losses to all producers and the eventual outcome is uncertain.[13] In a competitive struggle, low-cost producers may have smaller financial resources than older, entrenched high-cost producers, and they may be forced into bankruptcy before their less efficient competitors.

12. Alcoa, General Electric, and Carl Zeiss will serve as illustrations of low-cost producers that have joined or organized cartels under such circumstances.

13. The photographic equipment, rayon, and certain branches of the chemical industries illustrate this situation.

When total unit cost of the efficient producers—though less than that of the high-cost producers—is higher than the variable costs of the less efficient producers, a competitive struggle may cause prices to fall for a time below total unit cost of even the efficient. This is a particularly strong possibility in periods of slack demand, and in industries where demand is inelastic.

*How Distribute the Burden of Readjustment?*

If goods can be produced more cheaply in new areas or by novel techniques than they have been produced in settled regions or by traditional methods, a shift in the sources of supply will inevitably bring temporary hardships, and may bring lasting ones, to those with vested interests in the old pattern of industry and trade. It will bring gains to the newly developing districts and to progressive enterprise, of course, and to consumers everywhere. But the gains and losses accrue to different persons. Consumers are usually numerous and scattered, and their gains may come in small lots. Those whose livelihood is tied up with a technique suddenly made obsolete may suffer wholesale misery. How long and how much they will suffer depends in the first place on whether society assumes responsibility for relieving their distress and in the second place on the number and attractiveness of alternatives open to them. If they are left to themselves, they may suffer much and long, particularly if other countries have raised obstacles such as immigration restrictions to their freedom of movement.

The state can redistribute the burden by taxation and social security legislation, but it cannot eliminate the costs of economic readjustment. A cartel arrangement that restricts output and raises prices may reduce investment losses by withholding from consumers some or all the gains of the technological advance. It may tax consumers generally to subsidize local high-cost producers. But to subsidize inefficiency is to flout obsolescence and to perpetuate waste. To relieve suffering by such means may often be politically expedient, but it is never economical. It would cost less to concentrate production on the low-cost processes, let the product sell for what it would bring, and tax consumers to support the displaced workers in idleness. If they were put to work elsewhere doing something profitable, the cost to the community would be further reduced. Such a program might also include some indemnification to investors for the capital losses incurred through technological obsolescence. Economy would require, however, that these indemnities should not be on a scale that would prevent or retard the movement of resources to other fields. This is no doubt the way a centrally planned economy that could afford to ignore political pressures and could count on

wisdom in administration would handle industrial readjustments. For it could scarcely tolerate what Veblen ironically called a "conscientious withdrawal of efficiency," or business sabotage.[14]

Programs for restricting production can bring at best temporary relief. If prices under such programs are higher than they would otherwise be, they tend to reduce consumption or even to divert demand to substitute products. High prices likewise encourage the retention of obsolete capacity, and at the same time encourage further expansion of low-cost capacity. Rather than helping to restore equilibrium, therefore, they may promote permanent disequilibrium.

But granting that both high-cost and low-cost producers may benefit from cartel arrangements, does it follow that the whole economy also gains? The interests of society as a whole often differ from those of some of its parts. To individuals their special interests often outweigh the general interest or seem to be synonymous with it. For example, Chilean officials depend on the votes of their fellow citizens, and confronted with immediate problems of Chilean welfare, the citizenry has not been much impressed by the argument that the world economy would be better off if Chilean nitrate producers were magnanimously to give way to synthetic producers.

### *The Case of Chilean Nitrates*

For more than half a century the Chilean nitrate industry was the principal source of Chile's national revenue. An export tax on nitrate of soda provided on the average 42.8 per cent of the government's ordinary revenue from 1880 to 1930—with a peak of 68 per cent in 1894. To a remarkable degree the Chilean economy is based on a world division of labor.[15] Chilean production is highly specialized and largely for export. In 1928–1929 Chile produced minerals valued at $153,000,000, while her agricultural and pastoral products were valued at only $146,000,000. Most of the minerals were exported. Nitrate of soda and its iodine derivative had an

14. A planned economy would also have the problem of readjusting production to technological change. The problem in its essence would be the same as in a free-enterprise economy: When should new methods be introduced and what provision should be made for those displaced by them?

15. While the whole Chilean economy once depended greatly on nitrates, the northern provinces have long relied on that industry almost entirely. Chilean copper also plays an important role in world trade in that commodity. For a more extensive survey of the origins, development, and problems of the nitrogen industry, see *Cartels in Action*, Chap. 4, and of the copper industry, Chap. 4 of this volume.

export value of $72,225,000 and accounted for more than 50 per cent of all Chilean exports. What Chile could buy in foreign markets for home consumption depended mainly on how much nitrate of soda the country sold abroad.

Between 1920 and 1933 a revolution took place in the nitrogen industry. The leading industrial countries developed mass production of synthetic ammonia from the air. World capacity for producing chemical nitrogen increased more than threefold, from 1,551,000 tons annually to nearly 5,000,000 tons. Although world consumption more than doubled during this period, Chilean production decreased from 430,000 tons a year to only 75,600 tons. The development of more accessible and cheaper supplies of nitrogen undermined the entire Chilean economy.[16] It threatened the economic and political stability of the nation. Under the impact of the new techniques and expanding plant capacity, nitrogen prices sank to unprecedented low levels. The annual average price of Chilean nitrate of soda, f.a.s. Chilean ports, declined from $51.88 a ton in 1921–1922 to $18.80 a ton in 1933–1934.

The benefits of improved techniques were widely disseminated. They brought cheaper nitrogen to consumers throughout the world, most of whom were farmers. On the other hand, the adverse effects of the readjustments occasioned by technological change were highly localized. Lower costs and expanding sales by foreign producers brought hardships to the whole Chilean economy. Chile's foreign trade declined, its unemployment increased, its government revenues fell off, and political and social unrest intensified. Between July 1931 and January 1933 Chile changed presidents seven times, usually without the formality of an election. Eventually the government encouraged the nitrate producers to join the international nitrogen cartel and obtain a position in world markets without carrying the competitive struggle to its bitter end.

### *The Copper Cartel and the General Welfare*

A similar general situation developed in the world copper industry at about the same time, although in this instance the principal

16. Not all the growth of the synthetic branch of the industry is traceable to technical superiority. Many governments subsidized domestic nitrogen production for military reasons. *Cartels in Action*, pp. 127-32.

sufferers were American mining communities.[17] To meet the crisis in the early thirties, the major American companies, traditionally the leaders in the international copper cartel, imposed on themselves severe output restrictions and tried to get the producers of low-cost African and Canadian copper to follow suit. On the refusal of this group to accept restrictions even approaching in severity those which the American companies considered expedient, the cartel broke up. Cheap copper from the African mines flooded European markets, long dominated by American big business, and even entered the American market.

This turn of events especially menaced the interests of the relatively high-cost, nonintegrated small-scale domestic mining companies, and they turned to the United States Government for relief. They demanded and got tariff protection for their home markets. Sketching a prospect of desolate mining communities, decreasing state revenues, increasing unemployment and labor unrest, they easily won the support of a congressional majority.

In this way American high-cost copper producers and the communities dependent on them tried to avoid the burdens of competitive readjustment, and it was no doubt to their interests that they did so. A prolonged competitive struggle in a free market would have forced the high-cost producers permanently to write down the capital value of their mines, if indeed it did not force their abandonment. Thousands of laborers would have had to look for other employment, thriving communities might have become ghost towns, and whole states would have been impoverished. The advantage to consumers of getting copper for perhaps 4 or 5 cents less a pound does not loom large in practical politics as compared with the tangible benefits of a regulatory scheme for salvaging segments of an industry once too rich and too proud to lean on a government crutch.

17. Two fairly distinct groups of producers make up the American copper-mining industry: a few large, integrated companies and a much more numerous group of small-scale mining companies. Members of the former group have their own smelters and refineries; two of them engage in extensive fabricating operations and are fortified by the ownership of low-cost mines in South America. Many of the smaller mining companies depend on these big companies to smelt their concentrates, and none of them possesses its own refinery. The big companies therefore dominate the copper market, and in particular the export market. See Chap. 4.

## *Another Example: Cuban Sugar*

The Cuban sugar industry found itself in an analogous situation in the twenties. Between 1923 and 1929 many cane sugar producers reduced their costs greatly. Javanese producers introduced a more productive species of cane; Hawaiian and Puerto Rican producers resorted to more intensive cultivation by irrigation and the use of fertilizers; American capital, exploiting the virgin and fertile eastern provinces of Cuba, introduced large-scale production, efficient organization, and modern equipment. As a result, production greatly increased and prices declined sharply. Meanwhile tariffs and other nationalistic measures designed to promote domestic production of beet sugar had greatly narrowed the market for cane sugar in the principal consuming countries. World sugar output increased from 18,654,000 tons in 1920 to 32,028,000 tons in 1929. During the same period the annual average price of Cuban raw sugar delivered in New York declined from 11.35 cents a pound to 1.99 cents.[18]

The impact of these developments fell most heavily on the high-cost native planters of Cuba. Sugar is the backbone of the Cuban economy. In 1927 it accounted for 78.8 per cent by value of all Cuban exports. Low prices would ultimately have driven high-cost producers out of the industry, but this might have undermined Cuba's entire economic structure and brought political and social chaos. In a country largely dependent for its prosperity on a single crop, the government could easily identify the nation's welfare with that of its native sugar growers. It could scarcely resist the clamor of its people for a state-enforced restriction scheme. Thus rapid technological change may completely disrupt the economic life of social groups specializing in the production of a particular commodity and integrating their operations into a world economy based on international division of labor.

## *How Coffee Valorization Worked Out*

The Brazilian coffee valorization scheme affords another illustration in point. Under the 1922 scheme a state bank established for the purpose lent money to coffee planters in years of surplus output.

18. See *Cartels in Action*, Chap. 2.

The planters then withheld the surplus from the market in order to maintain prices at a "normal" level. The Coffee Institute, which administered the plan, deliberately fixed prices to cover the relatively high costs of the older plantations, where the yield per acre (or per labor unit) was low. During four years of relatively short crops the scheme worked. Then came the bumper crop of 1927, largely the result of favorable weather—26 million bags against an average annual demand of 14 to 15 million bags. It was followed by a second bumper crop in 1929 of 29 million bags, a third one of 27 million in 1931, and a fourth of 30 million in 1933.

Until 1929 the coffee valorization plan brought prosperity to the Brazilian economy, so largely dependent on coffee. It brought more money to coffee planters than they had ever had before and higher wages to their employees. Liberal spending insured a ready market for Brazilian manufacturers and expanding business for Brazilian merchants. With their surplus funds, coffee planters expanded existing plantations or opened new ones.[19] Expansion had begun even before the bumper crop of 1927 with its large cash yield. Thereafter it was accelerated. Although new plantings had nothing to do with the bumper crops of 1927 and 1929 they eventually converted a fortuitous overproduction into a persistent surplus.

After the 1929 bumper crop the Institute was bankrupt and the scheme collapsed. In 1932 the Brazilian Government took over direct control and began a systematic program of crop destruction on a scale perhaps unequaled anywhere at any time. Coffee was cultivated, harvested, and processed as usual, without restriction. From the proceeds of an export tax on coffee, however, the government purchased a part of each planter's crop and burned it. In four years bonfires consumed the equivalent of two average coffee crops and enough coffee to have supplied all the world's consumers for about a year and a half.[20] Unfortunately, even this did not solve what had by then become a basic problem—an excess of productive capacity over that required to provide for coffee consumption at the customary rate.

19. See V. D. Wickizer, *The World Coffee Economy*, with special reference to "Control Schemes," Food Research Institute, Stanford University, 1943, Chap. 10, especially pp. 145-46.

20. J. W. F. Rowe, *Markets and Men*, Macmillan, New York, 1936, p. 22. According to Rowe, this program cancelled the work of a million people laboring from dawn to dusk six months a year in sweltering heat, pruning, weeding, and tending 2,000,000,000 coffee trees and thereafter preparing the crops for the market.

*Tin Cartel as a Stabilizing Agency*

The tin cartel illustrates strikingly the effects of an arrangement for protecting vested interests against losses threatened by competitive readjustments. Although tin-mining capacity had expanded by 1929 to a level above prospective requirements, a comprehensive cartel was organized only after marked slackening in demand and great decline in price during the depression of the early thirties.[21] Meanwhile the Bandoeng Pool, under British and Dutch governmental sponsorship, had strongly influenced prices in the twenties. It had succeeded by 1927 in lifting tin prices to almost two and one half times their 1921 level.[22] The object of the pool was to withhold surplus war-accumulated stocks and to release them gradually as market conditions warranted. The gradual release of stocks tended to conceal the fact that consumption during the middle twenties exceeded production. In this way, even if no concerted curtailment of investment accompanied the Bandoeng Pool, its operation probably retarded expansion of capacity until an acute shortage had developed.

The high prices of 1926–1927 led to a speculative boom in tin properties. The increase in capacity was traceable partly to technological advances, partly to the opening up of new deposits. Dredge mining increased sharply until by 1929 it represented 30 per cent of the Malayan production, compared with 9.6 per cent a decade earlier. Meanwhile, because of structural improvements in dredges, the average annual output of metallic ore per dredge had nearly doubled, rising from 177 to 324 tons. With the completion of the expansion program, total productive capacity was probably about 220,000 tons.[23] But capacity attained its maximum just as a decline in consumption was setting in. Mine output reached a postwar peak in 1929 of 192,616 tons, but by 1932 had fallen to less than 100,000 tons.

21. On tin restriction, consult K. E. Knorr, *Tin Under Control,* Food Research Institute, Stanford University, 1945; Elizabeth S. May, "The International Tin Cartel," in W. Y. Elliott, and others, *International Control of Non-Ferrous Metals,* Macmillan, New York, 1937, Chap. 7; *Intergovernmental Commodity Control Agreements,* International Labor Office, Montreal, 1943, pp. 73-103; and *Tin Investigation,* Report of the Subcommittee of the (House) Committee on Foreign Affairs on H.R. 404, 73d Cong., 2d sess., on H.R. 71, 47th Cong., 1st sess., Washington, 1935.

22. From 29 cents to 71 cents a pound. See Elliott, *et al., op. cit.,* pp. 313 ff.

23. J. W. F. Rowe, "Some General Economic Aspects" in Elliott, *et al., op. cit.,* p. 70. In accordance with trade usage, all tonnage figures shown here are for long tons (2,240 pounds).

The evidence suggests that overcapitalization accompanied the growth of overcapacity. The Anglo-Oriental Mining Corporation, a holding company chartered in February 1928, had promoted the London Malayan Tin Trust, Ltd., which acquired large holdings in sixteen dredging companies in Malaya as well as the entire capital stock of Anglo-Malayan Tin, Ltd. In addition to its Malayan properties, it opened large areas in Nigeria. Although it acquired some valuable assets, their costs were extravagantly high. Apparently it was interested as much in promoting speculative ventures as in mining tin.

As early as 1929 Anglo-Oriental began a program for increasing prices through the manipulation of tin inventories. Later in that year it took the lead in promoting the Tin Producers Association, which undertook a voluntary output restriction program. It was not until the price of tin had sunk to a third of the 1927 price, which was the high for the decade, that low-cost producers generally were brought into a restrictive scheme, and then it was only under compulsion of their governments.

### *Government Cooperation in Tin Restriction*

The prosperity of the Federated Malay States, the Dutch East Indies, Nigeria, and Bolivia is intimately related to the volume and prices of tin exports. Before World War II, Malaya had only two important exports, tin and rubber. The economy of the Dutch East Indies was only slightly more diversified. Moreover, the Dutch Government was a part owner in tin-mining companies, with a capital investment amounting to 73 per cent of the total for the Netherlands Indies industry.[24] Tin exports from Bolivia in 1927 accounted for three fourths of all its exports. Although Nigeria's tin exports represented in 1928 only 11.5 per cent of its total exports, as Nigerian and Bolivian mines were relatively high-cost producers they stood to lose the most in a prolonged competitive struggle in a contracting market.

In 1931, faced by steadily falling prices and declining demand, the governments of the major tin-producing countries set up a compulsory output restriction scheme embracing 95 per cent of world

24. Elliott, *et al., op. cit.*, p. 34.

productive capacity. Under this arrangement, production of tin in excess of a prescribed quota became a criminal offense.[25]

The tin control scheme succeeded magnificently if it is judged solely as an output-restricting and price-raising program. When the plan went into effect early in 1931 the International Tin Committee recommended that each country restrict its output to 78 per cent of its 1929 output. When this proved insufficient to reduce surplus inventories and stop the decline of prices, the Committee undertook more drastic restrictions. By May 1933 it had reduced allowable output to one third of capacity, and inventories to 50,000 tons, or by one sixth. Meanwhile prices had risen to 46 cents a pound as compared with 27 cents just before compulsory restriction.

Within twenty-seven months the scheme had raised the price of tin to the average level prevailing in 1929 before the stock market crash. But the Tin Committee was not satisfied. It maintained restriction at only 33.3 per cent of standard tonnages through the latter half of 1933, and though in the first half of 1934 it raised allowable output to about a 40 per cent rate, and during the second quarter to 50 per cent, its restrictive policy was so severe in the face of increasing consumption that the price rose to 56 cents a pound in the spring of 1934. Then when demand showed signs of flagging, it promptly reduced the output rate to 40 per cent for the last quarter of 1934, and held it there until the second quarter of 1935. With prices rising to postdepression highs and inventories rapidly dwindling, the Committee raised the allowable output rate, for the first time, to 65 per cent of capacity in the summer of 1935. Thereafter the Committee's changes in the output rate, together with its management of a buffer-stock scheme introduced in mid-1934, kept tin prices fairly stable until 1937. Then they rose briefly to over 60 cents a pound in response to rearmament demands and

25. The first agreement was signed on February 28, 1931 in London by representatives of Nigeria, Bolivia, the Netherlands (acting for the Dutch East Indies), and Great Britain (acting for the Malay States). Siam joined in July 1931. An agreement of October 27, 1933, with the same parties, superseded the initial agreement, and on July 10, 1934 the International Tin Committee announced the adherence to this agreement of French Indo-China, the Belgian Congo, Portugal, and Cornwall (England). These signatories made a new agreement on January 1, 1937, to expire December 31, 1941. On September 9, 1942 the governments of Belgium, Bolivia, the United Kingdom, and the Netherlands renewed the 1937 agreement (retroactively to January 1, 1942) for another five years. See International Labor Office, *op. cit.*, pp. 73-103, and Knorr, *op. cit.*, pp. 105-89.

a speculative flurry, dropped to less than 40 cents in the spring of 1938, reflecting the current trade recession, and rose to more than 70 cents a pound when war broke out in 1939.[26]

The International Tin Committee has kept prices high enough to enable nearly all producers, high-cost and low-cost alike, to make profits even with output restricted to 40 per cent. That is a remarkable record. As Knorr puts it, the tin controllers exerted "their influence toward securing a very high 'fair' price to the producers." [27] And he adds that the preservation of high-cost producers was the main explanation of this strategy. His study of the financial records of twenty-four selected tin-mining companies shows that in every year from 1934 to 1939, inclusive, more than half paid dividends in excess of 10 per cent, and that even in 1933 eight of them paid dividends of 10 per cent or more while all but four paid some dividends. He points out that "in 1936 and 1937, profits and dividends rose to an extremely high peak comparable to the tin boom of 1926." [28] But record profits were not, of course, the avowed purpose of tin restriction.

*Tin Restriction Fails to Stabilize*

The 1931 agreement expressed the object of the tin program as follows:

> The scheme is intended to secure a fair and reasonable equilibrium between production and consumption with the view of preventing rapid and severe oscillations of price.[29]

Judged by this standard the cartel's record is bad. It has not pre-

26. Cf. Knorr, *op. cit.*, p. 127, and *Minerals Yearbook*, Bureau of Mines, Washington, 1940, p. 685. During the war years, government purchases and allotments kept the price to industrial consumers close to 50 cents a pound, despite the reduction of world output from a record high of 245,500 tons in 1941 (before capture of the East Indies) to half that amount annually during the remainder of the war period. However, to ease the drain on stocks and to build up sources of supply outside enemy control, the United States and Great Britain maintained official buying prices about 10 per cent higher than their selling prices. In the case of Bolivian tin the premium to producers was even higher than this, more than 25 per cent. See *The Economist* (London), March 16, 1946, pp. 426-27.

The International Tin Committee virtually removed production restrictions while the war was on, though quotas (at or above capacity) were formally assigned to keep the control machinery oiled up and in readiness for postwar use.

27. Knorr, *op. cit.*, p. 227.

28. *Ibid.*, p. 224.

29. Paragraph one of the agreement. See International Labor Office, *op. cit.*, p. 73. Subsequent agreements restate this objective, although not always in the same language.

vented violent short-run fluctuations in prices. For example, the difference between the highest price (56 cents) and the lowest (22 cents) in the New York market in 1933 was 34 cents a pound, or more than 150 per cent of the year's low. The same market in 1937 recorded a high of 67 cents a pound and a low of 41 cents, and in 1939 the range was from 75 cents to 45 cents. Price movements in shorter periods reflect this erratic character of tin markets under compulsory control. In the twenty-one market days from February 12 to March 15, 1937, tin rose on the London market from £229 to £311 a ton, an increase of about 36 per cent. During the thirty-eight market days from September 15 to November 8, 1937, it fell from £264 to £181 a ton, a decline of more than 30 per cent. Oliver Lyttelton, then Chairman of the London Tin Corporation (and later Secretary of the Board of Trade in the wartime Coalition Government), declared at the company's annual meeting in July 1938 that these movements, were "as violent as any in my experience of the last seventeen years." [30]

Reviewing the 1939 tin market gyrations, an experienced mining engineer concluded that:

> As a price stabilizing factor international control of tin was as unsuccessful as ever. Owing to the war, it is difficult to say what the range of prices actually was, and on a superficial view it will doubtless be said that the war and not the Control should be blamed for prices reported to have run up in the United States to 70 cents per pound, or say £390 a ton for Straits. But if the situation be examined more closely it will be realized that the rush to buy tin after the outbreak of war, was due principally to the United States shortage of supply caused by a belief that the Buffer Pool would keep prices at or below £230 per ton for standard. As usual the ITC [International Tin Committee] delayed the increase in quotas too long.[31]

It is true that in other peacetime years of international tin control prices did not fluctuate so wildly as in the period discussed. But in the thirties, which on the whole were characterized by compulsory regulation, tin markets were less stable than in the 'twenties.[32] Special factors contributed to their volatility in 1933, 1937, and 1939. In 1933 the progressive depreciation of the dollar and the wide

30. See *American Metals Market* (New York), October 30, 1943, p. 5.
31. E. Balliol Scott, in *Engineering and Mining Journal* (New York), February 1940, p. 47.
32. See table of high, low, and average prices of tin at New York and London, annually, 1921–1940, in Knorr, *op. cit.*, p. 304.

*fluctuations in exchange rates accentuated the price changes on imported commodities like tin. In 1937 a war scare, coupled with a feverish speculative boom (particularly in nonferrous metals) and subsequent collapse, helped to make tin prices everywhere more erratic than they otherwise might have been. In 1939 the outbreak of war was a similar disturbing influence.

So much being granted, the tight control of tin supplies and the high-price policy that the Tin Committee maintained unquestionably tended to keep consumers' inventories at a minimum and thus to make the tin market more vulnerable to "external" disturbing factors than it would have been under free-market conditions. The auxiliary device of a buffer-stock scheme, as it was actually administered, further strengthened this tendency toward a dangerous depletion of readily available reserves. Knorr observes of the disappointing experience of these buffer-stock operations: "it does not prove that a restriction scheme, with the assistance of a buffer stock, is incapable of preventing sudden and severe oscillations of price." [33] But he adds that though the tin controllers may learn "from the fiascos of the past" the prospect of their doing so is not bright. His summary of the grounds for this skepticism deserves quoting:

> The crux of the problem lies in the potential conflict between price-stabilizing and price-boosting policies. . . . The trouble is that, owing to the very nature of their selfish interests, producers aspire toward maximization rather than stabilization of income. As long as both functions, price-boosting and price-stabilizing, are entrusted to the same institution and the same controllers, who are representatives of producers' interests, so long even the best of machinery and institutional devices will not guarantee success in preventing undue price fluctuations.[34]

## *Tin Cartel as Savior of High-Cost Producers*

The scope of membership of the international tin consortium practically precluded the development of an economically constructive policy designed to eliminate excess capacity and restore equilibrium. Among the original signatories of the agreement were Bolivia and Nigeria, and cost of production in these countries is relatively high. Moreover, the extremely favorable concessions made to subsequent adherents to the scheme, several of which, like Portugal and French

33. *Ibid.*, p. 211.
34. *Ibid.*, pp. 211-12.

Indo-China, represented high-cost producers, suggest that the cartel was more concerned with its inclusiveness than with solving the industry's troubles. These arrangements indicate that market control, not economic readjustment, was the chief purpose animating the tin controllers.

Throughout its life, the cartel has shown tender concern for the interests of high-cost producers, no less than for those of the more efficient producers.[35] It has granted much more liberal quotas (standard tonnages) to producers in high-cost areas than to those having cost advantages. At no time has it permitted current output rates to force prices down to anything like the cost of the more efficient producers. According to Rowe:

> . . . when the well-known chairman of one of the biggest tin-mining companies in Malaya assures him that the East could produce at a profit all the tin required by the world at £100 per ton, and he is paying £230, the manufacturer rather naturally considers that the price of stability is altogether too high, and that the tin restriction scheme is nothing more or less than a grasping monopoly.[36]

Even if this cost estimate is liberally discounted for possible error or bias, it would still leave a wide margin between the total unit cost and the average price. In the ten years 1934–1943 the annual average price of tin on the London market fell below £200 a ton only once. That was in 1938, when it was £190 a ton.[37] Certainly the success of the cartel from the business standpoint lies primarily in its having prevented the liquidation of high-cost producers.

### *Did the Tin Cartel Promote American Military Security?*

Some writers have suggested that this policy promoted national security and thereby benefited the United States above all other

35. This solicitude for producers is reflected in the deal the Tin Committee made with the Metals Reserve Company when this subsidiary of the Reconstruction Finance Corporation undertook in 1940 to stock-pile tin in the United States for a war emergency. The Committee required as compensation for advancing the allowable output rate to capacity (130 per cent of standard tonnages) that Metals Reserve agree, barring United States entrance into the war, to hold all tin it acquired (75,000 tons guaranteed purchases) for three years from January 1, 1941, to notify the Committee of its intent to liquidate any portion three months in advance of liquidation, and to liquidate no more than 5 per cent of the accumulated stocks (nor more than 5,000 tons) in any three months. Civilization might be liquidated but not tin producers. See *ibid.*, pp. 177-80.

36. Rowe, *Markets and Men*, p. 166.

37. Knorr, *op. cit.*, p. 304. See also *ibid.*, p. 224.

countries and beyond all calculation.[38] For among the high-cost firms are the Bolivian and Nigerian producers. If they had been liquidated, it is asked, where could we have turned for our tin supplies after Pearl Harbor? By preserving high-cost tin producers with output accessible to the Western democracies, we are told, the cartel helped to insure adequate wartime supplies of tin and thus contributed signally to military victory.

This contention raises two important questions. Did compulsory tin control provide an economical method of insuring adequate wartime supplies? Was it a reliable method? In answer to the second question, whatever contribution the tin cartel made to military victory was purely fortuitous. The Tin Committee's restrictive program was designed for the security of tin producers, not for the security of a democratic society. If the United States is to plan national defense intelligently it can scarcely afford to rely on the self-serving strategems of producer-dominated cartels to assure an adequate supply of strategic materials.[39]

In answer to the first question, if we wish to plan an adequate supply of strategic materials we can find far more economical methods than those the tin controllers used. To preserve high-cost producers, the Tin Committee raised prices for high-cost and low-cost producers alike. If Rowe's informant correctly estimated that the efficient dredge operators could meet the world's tin requirements, at a profit to producers, with the price at £100 a ton or 20 cents a pound (under cost conditions of the mid-thirties), the cartel has taxed consumers at an average rate of about $90,000,000 annually in order to preserve high-cost producers. Most of this subsidy went to low-cost producers as bonuses for producing uneconomically at rates far below capacity. It would have been less costly to pay owners of high-cost mines as much to hold their mines in stand-by condition as the profits they got from operating them, and to support the workers in idleness. An excise tax on consumers that would

38. See *American Metals Market* (New York), November 13, 1943, p. 3. This article was the third and final installment of a series on the history of the tin cartel, reproduced from *Tin*, official organ of the Tin Producers Association. The other two installments appear in the issues September 13, 1943 and October 30, 1943.

See also, for a penetrating analysis of this suggestion, Knorr, *op. cit.*, pp. 242-44.

39. Judging from the tin experience, cartel sponsorship by governments of producing countries does not make cartels a more reliable device for safeguarding the national interests of democratic peoples.

have provided adequate funds for this purpose would have amounted to only a fraction of what they had to pay in the form of overcharges on the tin that the Committee vouchsafed them. Had the workers been employed to produce other needed goods, the world would have been enriched by so much more.

### *Basic Defect of "Defensive" Cartels*

A fundamental defect of so-called defensive cartels is that they have tried to stabilize economic situations by grappling with the effects of disequilibrium rather than with its causes. Even if it is conceded that the copper, coffee, sugar, nitrogen, tin, and other industries suffered from excess capacity before the depression, as their members allege, none of the control schemes gave attention to the basic problem of economic imbalance—the surplus of resources in the industry. All the schemes, true enough, tried to establish a closer relationship between production and consumption, but only by restricting output.

Chronic surplus in any industry, with plant capacity in excess of demand even during periods of general business expansion and increasing consumption, can be overcome only by depreciation of capital values or by moving productive resources—land, labor, equipment—to industries in which these resources would be more highly valued. To attempt to balance output and consumption by restricting output and raising prices tends to promote disequilibrium by discouraging demand and encouraging the influx of additional resources into an already distressed industry. Such a program can keep prices high only by making the control over established enterprises permanent, comprehensive, and compulsory, and by coercively preventing the entrance of new producers or new facilities into the industry. Whenever a cartel raises prices above total unit costs for producers using the most economical techniques, it makes the field attractive for new investment, and new producers will add to the facilities unless some coercive power intervenes to check them.

### *Cartels as Temporary Measures During Depression*

Some economists believe that the costs to society are too great to permit the processes of economic readjustment in industries with surplus capacity to take their course when trade is slack and un-

employment prevalent.[40] Unrestrained competition in such a period may depress prices, they say, not merely below the total cost of the more efficient producers, but temporarily, perhaps, even below their prime costs. Moreover, in a competitive struggle waged under such conditions victory does not necessarily go to the low-cost producers. Those firms with the strongest financial backing are likely to have the greatest stamina. Efficient producers with inadequate capital may go bankrupt; their plants are likely to deteriorate for lack of upkeep, if they are not sold as scrap.

Revival of business may find both low-cost and high-cost producers financially ruined, and productive capacity so reduced that the industry cannot promptly meet normal consumption requirements. The result may be a severe scarcity of goods and a speculative rise in prices. If, then, the industry must rebuild facilities that competition destroyed during the period of restricted demand, consumers might be better off if part of the surplus plant capacity had for a season been kept idle by output restriction schemes.[41]

One must concede, moreover, that a business depression is not a propitious period for making competitive readjustments. When general purchasing power is diminishing, demand is not stimulated much by price reductions. Hence the readjustment may take place at a much lower price level than if it took place during a more prosperous period. Again, those forced out of employment during depression find it difficult, if not impossible, to find other means of making a living. When the high-cost sector of the distressed industry is localized and unemployment is concentrated in one or two countries or regions that depend mainly on this industry for their prosperity, the hardships resulting from readjustment may bring political upheavals and even insurrection.

### *Questions That Arise*

Cannot compulsory restriction schemes serve a useful purpose during depressions as temporary expedients for preventing price

40. See, for example, Rowe, *Markets and Men,* particularly Chap. 10, and the same author's chapter on "Some General Economic Aspects," Chap. 3 in Elliott, *et al., op. cit.* Knorr (*op. cit.,* pp. 238-41) persuasively challenges Rowe's contention.

41. This argument is even more persuasive for control schemes that avert the liquidation of productive capacity in an industry suffering from only a temporary surplus. The difficulty is to confine the use of the cartel device to such a salutary objective and to the actual conditions mentioned.

debacles and the consequent disappearance of even necessary capacity? Cannot democratic governments devise and regulate, either multilaterally, or when it suffices, unilaterally, cartel controls that can be withdrawn as trade recovers? Is it not possible to reduce production temporarily so that high-cost producers, whether their operations are suspended or restricted, receive partial compensation in higher prices than would otherwise prevail? Finally, to assure that capacity in excess of balanced long-run market requirements is nevertheless eliminated, is it not possible to retard the price increases on the upswing of the cycle so that high-cost producers will have no incentive to resume production? May not the interested governments, by a discriminating exercise of their police powers, so regulate events that low-cost producers alone will be induced to supply the expanding demand as business recovery proceeds? Cannot "relief" for high-cost producers be gradually withdrawn as improving opportunities for investment and employment in other fields progressively take up the slack?

### *"Tempering the Wind"*

If affirmative answers to these questions could be found, many government officials as well as businessmen would certainly be made happier. Consider, first, those branches of industry that require large capital investment in relation to value of annual output and are therefore managed mainly on corporate business lines rather than, as in agriculture, by worker-owners. Assuming the necessary statesmanship and administrative skills, the principal beneficiaries of such arrangements as we have suggested are bound to be the investors in technologically outmoded productive facilities. These are the owners of the "surplus" capacity. Society doubtless has some interest in seeing that their losses are not unendurable, but more specifically it has an interest in seeing that in extricating themselves from their predicament they do not, like a blinded Samson, bring down on the heads of themselves and others the whole edifice of the economy.

The primary obligation of society in overcoming economic maladjustments is surely not to those whose faulty direction or mismanagement has brought about a wasteful allocation of resources or an inefficient combination of productive factors, and who as a result face, at worst, no more than an impairment of their capital. It is,

rather, to those who may have had no part in the directorial or managerial control of the industry but who find themselves unemployed in consequence of the mistakes of others.[42] The workers' loss of livelihood is in any view, but particularly in a humanitarian view, much less tolerable than any deprivations imposed on investors.

Secondly, and even more important, the use of compulsory restriction to lighten the burden of economic readjustment by deferring the necessary transfer of resources to a more favorable time tends to increase, rather than diminish, those readjustment costs that fall on employees. Reduced production inevitably means reduced employment. The advocates of cartels as a temporary expedient for easing the plight of surplus-capacity industries during a depression are prone to overlook the fact that their proposal amounts, in substance, to shifting some part of the costs of readjustment from those who have ownership at stake in distressed industries to those who have a livelihood at stake. Concerted output restriction, whether by compulsory or voluntary action, means fewer jobs and smaller payrolls.

In the third place, to the extent that the costs of overcoming such economic maladjustments fall heavily on labor, and to the extent that society has an obligation to mitigate those costs, society can discharge its obligation and counteract the evils of unemployment by more economical measures. Social security programs, particularly if supplemented by public investment policies skillfully adjusted to the prevention and correction of cyclical fluctuations in trade, can soften the hardships of unemployment more effectively than any compulsory restriction scheme, however prudently devised and wisely administered. The great advantage of social security measures is that they involve less risk of reducing the incentive of business to shift from industries of surplus capacity to industries promising greater gain or growth.

Finally, the administrative problems of constructively managing a compulsory restrictive scheme, or cartel, are singularly difficult. Though they may not be insoluble, it places a severe strain on credulity to suppose that organs of democratic government, operat-

42. This is not to deny that trade unions may not acquire such bargaining power that they can impose wage scales and other terms of the employment contract that seriously affect the market position of employers. But the monopolistic influence of trade unions in certain industries, whether complementary to or a limitation on that of business firms in those fields, is a subject beyond the scope of the present study.

ing through political processes as we know them, can assure the nice discrimination required for separating the low-cost sheep from the high-cost goats. It places an even greater strain on credulity to believe that privately organized cartels will find a way of dealing with economic maladjustments so as to minimize the losses of high-cost producers without at the same time sacrificing the community's long-run interest in a balanced economy.

Certainly no greater likelihood exists of a miscarriage of the competitive process in free markets than of a miscarriage of the administrative process in either public or private collective controls.[43] Any inference that competitive readjustments under depressed business conditions tend to bring ruin to both high-cost and low-cost producers is not realistic. The burdens of economic readjustment fall most heavily on the inefficient, whether their inefficiency stems from faulty investment or poor management. But the high-cost or low-cost status of a firm is not a fixed position, permanent and unchangeable. A high-cost producer at the beginning of a depression may be a low-cost producer by the time recovery sets in. A new enterprise, experimenting with a novel technique, is more likely to thrive on adversity than an established concern with a smug, even if competent, management.

### *Who Are the High-Cost Producers?*

The factors that determine a producer's total unit cost are legion. Firms not only differ in technical advancement, financial resources, managerial resourcefulness, location, market connections, the quality of raw materials available to them, wage and power costs, and in other respects, but their advantages or disadvantages in each of these categories are subject to change. The elements of competitive advantage and competitive handicap constantly change and at no time are they more fluid than in a time of depression. Survival in a competitive market depends not on a fixed set of facts, and certainly

43. This judgment predicates a general resort to such industry-wide restrictive schemes. Even if intergovernmental commodity agreements were limited to a small sector of the economy, say to agricultural products, the difficulties of assuring wise and prudent administration would still be great indeed; but as the magnitude of the task is reduced the chances of miscarriage would possibly decline and the evil consequences of errors would certainly diminish. For an exploration of the feasibility and prospects of an intergovernmental commodity agreements program of modest compass, see Chapter 9.

not exclusively or even predominantly on the length of one's purse.

In an industry in which productive capacity exceeds the rate of demand, even during generally prosperous periods when prices are high enough to cover total unit costs of the less—but not least—efficient producers, some firms must write down their capital values or find some offsetting advantage for the element of cost in which they have a handicap. But no one can say which firms at any given time are most vulnerable and least capable of overcoming a competitive handicap or of maintaining a competitive advantage. What is sure is that low production costs will improve a firm's chance of surviving a depression. A depression is apt to perform needful surgery by lopping off that capacity in an industry which represents misdirected investment or relatively inefficient management.[44]

### *Social Strategy of Economic Control*

The basic source of economic maladjustment is change. Although economic change upsets calculations, it is inherently neither good nor bad. But without change, economic advancement is impossible. Were a society to rule out freedom of consumer choice, forbid the introduction of new techniques, prohibit exploration for new resources, and freeze the existing scheme of economic control, it could probably avoid economic maladjustments, or at any rate their worst features. It could have economic security of a kind.

Without forbidding change altogether, a society might restrict it, "rationalize" it, or plan it, for example by developing a pattern of industrial control in which collective direction and compulsory coordination were greatly expanded. No society, however, can purchase freedom from economic maladjustments, can get total economic security, come what may, without paying the price. That price is a limitation of economic freedom and economic progress. It may be that the price is worth paying. In a democracy, that is a decision for the majority of the people to make; but they are entitled to full information on what it involves and what it implies. It is not a decision that can safely be made in the dark.

If the process of spontaneous economic readjustment is to be

44. This is not a defense of depressions. It is merely a statement of one of their consequences. Undoubtedly the evil consequences socially overbalance the salutary. To rid ourselves of cyclical unemployment and financial losses, an ounce of prevention is worth a pound of cure—if not more!

stifled, or if not stifled, then curbed, channelled, and directed by collective authority, it is imperative that the standards employed in carrying out such an undertaking be clearly defined and popularly understood. Even more important than providing a mechanism is providing criteria for its use. In a democratic society it will not do to set up agencies, even public agencies, with carte blanche to do what the selected officials happen to regard as "good" or "reasonable." Much less will it do to sanction private agencies, such as cartels, to perform public functions in accordance with what the members of these privileged groups conceive to be the public interest. Plainly, if we are going to "engineer" economic readjustments, to do the job even tolerably well we must define surplus capacity in unambiguous terms. We must know the total unit costs of every producer, and have full information on the several elements of cost making up the total in each case. Finally, we must be prepared to submit to authoritative directions on investment, disinvestment or recapitalization, employment, output, sales, and prices.

All this would be but the minimum implementation of a scheme of collective control for effecting economic readjustments. Moreover, it would be economically fatal not to recognize that the failures of nominally competitive and legally free markets are traceable as often to deficient productive capacity as to surplus capacity. Save during depressions, indeed, excess capacity in one field is meaningless except in terms of undercapacity elsewhere. It follows that no strategy for dealing with economic maladjustments solely in terms of restriction of output, reduction of employment, recapitalization, and price stabilization in the particular industries suffering from overexpansion and overproduction offers any real prospect of a fundamental solution for the problem of economic balance.

The major stress in any effective strategy for combatting depression must be on expanding investment, output, and employment in industries generally, and particularly in those of relatively short supply and high returns. This is true economic prophylaxis. A dynamic economy will not lack investment opportunities, market outlets, and employment openings. It continually creates channels in place of those that are shrinking or drying up. On the other hand, an economy that puts its trust in, and bends all its energies toward, restriction as a corrective of occasional economic maladjust-

ments is likely to find depression becoming both chronic and epidemic. Every industry becomes one of surplus capacity when trade is depressed, output and employment are curtailed, and purchasing power is greatly reduced. To try to maintain or restore prosperity by a general restriction of supplies, here, there, and elsewhere, throughout an economy, is an exercise in futility. It can lead only to economic stagnation and general impoverishment.

## Chapter 6

# CARTELS AND WAR-BORN MALADJUSTMENTS

MODERN WAR in a short time upsets customary supply-demand relationships much more completely than inventions or changes in consumer taste. War, moreover, profoundly influences consumption habits and the rate of technological change. War also intensifies economic nationalism and promotes economic autarchy.

Modern war requires total mobilization of resources. Gearing production to supply war goods blocks the demand for many civilian goods. Idle resources must be put to use, others must be converted to military ends, and new productive capacity to support military operations must be created. Under pressure of war, nations cut off from their usual sources of supply often adopt new techniques once regarded as extravagant.

World War I conjured into being a vast industrial apparatus which the return of peace made largely superfluous. It not only greatly expanded plant capacity for basic war materials, but it seriously disturbed customary market relationships. During World War I aggregate capacity for producing iron and steel, nonferrous metals, ships, nitrates, and a host of other products expanded far beyond ordinary peacetime requirements. The shipping shortage, the German submarine campaign, and the Allied blockade of Europe forced buyers to turn to new and temporarily more convenient sources of supply for many nonmilitary commodities. Devastation in some countries temporarily hindered domestic production of certain products, leading to development or expansion of foreign sources of supply to fill the gap. World War I gave impetus to industrialization in hitherto backward countries, notably Japan, and so laid the basis for a bitter postwar struggle for world markets.

World War I and subsequent political changes have been appropriately characterized as a "vast series of shifts in the fundamental conditions of demand and supply" to which the economies

of virtually all countries were forced to adjust.[1] Governments, unfortunately, frequently endeavored to control readjustments in order to promote national interests, and complicated rather than simplified matters. Many postwar cartels grew out of wartime market disturbances and the nationalistic policies they bred.[2] These cartels represented attempts to prevent or lessen the losses competition would have caused in overexpanded industries.

World War II unfolded on a vastly larger scale. It involved more soldiers and more industrial workers. It lasted longer and used more destructive weapons. It disturbed industry and trade more violently. In many basic industries the war expanded capacity beyond all precedent. In many countries domestic capacity was expanded not merely to meet war needs but to fill domestic requirements previously satisfied largely by imports.

Moreover, World War II created conditions favoring postwar expansion of industrial capacity in numerous lines. The pent-up demand for consumers' durable goods and a credit-financed revival of demand in war-devastated areas may for a time challenge the capacity of existing facilities to supply a temporary boom market. This circumstance may attract additional facilities into some industries, even though in the long run they cannot show a profit. Capacities in some directions will almost certainly, under such abnormal conditions, outstrip civilian requirements.

### *Wartime Expansion in the United States*

The United States led the world in wartime expansion of productive facilities. The other Allied nations looked to America for both bread and cannon. In 1940 the United States had facilities to produce annually about 81.6 million tons of steel ingots; by January 1, 1945, about 95.5 million tons.[3] While this increase of 17 per cent may seem small in terms of war-expanded output of steel products, it looks large when it is recalled that between 1920 and 1940 the average operating rate of the American steel industry was only 59.2 per cent of capacity.

1. Lionel Robbins, *The Great Depression,* Macmillan, London, 1934, p. 3.
2. For example, several countries promoted expansion programs that contributed to the organization of international cartels in steel and nitrogen, and to the formulation of world-wide sugar control schemes. See *Cartels in Action,* Chaps. 2, 4, 5.
3. *Report to Congress on Disposal of Government Iron and Steel Plants and Facilities,* Surplus Property Administration, Washington, October 8, 1945, p. 1.

The increase in United States facilities for producing magnesium was spectacular. The end of the war saw the country with a productive capacity of more than 500 million pounds a year, compared with an estimated maximum annual consumption in the immediate postwar years of 65 million pounds.[4] During the war primary aluminum capacity expanded sixfold. In 1945 the Surplus Property Board calculated "maximum economical primary aluminum capacity" at 1,502,000,000 pounds a year. This compares with a 1939 domestic consumption of 327 million pounds.[5] Our war-born synthetic rubber industry can produce about one million tons annually. If far eastern rubber plantations are all restored, total world capacity for producing rubber may be between 2.5 million and 3 million tons a year—about twice the 1939 output.[6] American agricultural production increased during the war by one third.[7]

Expansion has by no means been confined to the United States. During the war Aluminium Limited (Alted), of Canada, became the world's largest producer of aluminum. At the end of the war Canada had about 90 shipyards for the construction of freighters, destroyers, and landing barges; before the war it had none. Australia and British India became big wartime producers of steel. Brazil now operates a $100 million steel plant; before the war it depended on steel imports.

The excess of productive facilities in numerous lines promises to bedevil the postwar world. Some economists see in the situation the possibility of a "wild scramble for markets, cutthroat competition, and inevitable ruin to high-cost producers." [8]

### *Cartels or Chaos?*

Ruinous competition, according to this viewpoint, will inevitably lead to political recrimination and international tension. In those

4. *Magnesium,* War Changes in Industry Series, Report No. 12, U.S. Tariff Commission, Washington, March 1945, p. 8.
5. *Aluminum Plants and Facilities,* Report to Congress, Surplus Property Board, Washington, September 21, 1945, p. 39.
6. *Rubber,* War Changes in Industry Series, Report No. 6, U.S. Tariff Commission, Washington, 1945, p. 92.
7. Theodore W. Schultz, *Agriculture in an Unstable Economy,* McGraw-Hill, New York, 1946, p. 1.
8. See, for example, J. Anton de Haas, *International Cartels in the Post-War World,* National Economic Problems, No. 404, American Enterprise Association, New York, 1944, p. 10.

countries in which producers of a certain commodity are at a competitive disadvantage, it is held, governments will not sit idly by while competition destroys the value of productive equipment and forces workers into idleness. They will, it is contended, resort to political measures to protect markets and men. Trade wars, tariffs, subsidies, import and export quotas, and growing international ill will may again be the climax of a competitive struggle in world markets.

This is not a pleasant prospect. Whether or not it will eventuate only the future will disclose. But neither economists nor statesmen will want to adopt a do-nothing policy and thereby run the risk of economic stagnation. Although they may differ on what should be done, they are likely to agree that it is necessary to do something.

Cartel proponents see the choice as one of cartels or chaos.[9] And by no means do they all agree that cartel arrangements should be confined to commodity agreements under governmental sanctions. It "may . . . be possible and practical for the government to delegate the function of establishing such agreements to the well-organized private interests immediately concerned." Private agreements "may in many ways be a more desirable method than the method of government agreement."[10] If postwar world markets are to be stable and orderly, it is argued, they must be governed cooperatively by private business combines. Stability bought at the price of government control, it is felt, may well prove too costly. The establishment of cartels by government action "will mean the gradual destruction of free enterprise . . . The alternative is to allow free enterprise to undertake the task of economic coordination. The task will then be placed in the hands of people versed in the problems involved. This means that private agreements will take the place of government agreements."[11]

"Constructive action" should be taken, of course, to see that "the agreements . . . will satisfy the legitimate demands of the consumers and the interests of economic peace," but "economic cooperation must replace 'cutthroat' competition."[12] The "principle accepted is

9. *Ibid.*, p. 41; see also Milo Perkins, "Cartels: What Shall We Do About Them?," *Harper's Magazine*, October 1944, pp. 570-78.
10. De Haas, *op. cit.*, p. 26.
11. *Ibid.*, p. 48.
12. *Ibid.*, p. 27.

that some cartel activity is economically desirable and that it is the duty of the government to see to it that bad cartels become good and good cartels remain good."

The history of restrictive private cartels does not inspire confidence in this method of solving the problem of surplus capacity. Two other possibilities suggest themselves: first, extension of wartime administrative controls for a limited period to regulate the reconversion process; second, creation through fiscal, monetary, and other devices of an expansive economic environment conducive to industrial readjustment. To explore in the following pages the potential contribution of these expedients to a solution of the problem of war-born excess capacity is not, of course, to impute to them any sovereign virtue. Account must be taken of their shortcomings and risks as well as of their promises of advantage.

### *Price System Unsatisfactory in Abnormal Periods*

A free-market price system cannot smoothly bring about economic readjustments so vast as those forced by a modern war. While it may be the best device yet developed for effecting piecemeal changes, or marginal readjustments, in an economy operating under less strenuous conditions, it is not designed for the protean task of converting from an economy of peace to one of war, and back again. In their analysis of free competitive enterprise, economists have generally contemplated continuing adaptation to developments involving changes of relatively slight magnitude in relation to the totality of economic processes. Such is not, however, the order of the day when a world war breaks out or suddenly ends.

Traditional institutional arrangements for organizing and directing production, typified by private business enterprise and competitive markets, must be drastically modified under the impact of war. However well designed it may be for realizing "plenty" in peace, the system of private enterprise and free competition is ill adapted to promoting maximum output of needed goods in all-out military effort. To rely as in normal times on private initiative and indulge the luxury of freedom of choice becomes impossible. In war, industrial mobilization under the direction of central authority is imperative.

A free market may eventually reconcile the divergent aims and

conflicting interests of the individuals and groups composing a nation, but the process is too slow and inefficient to serve when life itself is in jeopardy. A free market loses in time of war much of its reason for existence. For while differences in immediate private interest among individuals and groups persist, in the face of a common danger fundamental cleavages tend to disappear, or at any rate to lose their sharpness. Thus, with virtual unanimity about the ends —or at least about the one overriding end—toward which production should be directed, all that remains to be done is to integrate economic activities in the common effort. This is essentially a managerial function. As such, it requires unified responsibility.

*Tasks of Mobilization and Demobilization*

To mobilize, train, and maneuver a modern army requires a unified military command. To equip and sustain it with the necessary guns, tanks, ships, planes, and provisions requires a unified industrial command. The tremendous changes on short notice in the uses of the community's resources cannot otherwise be accomplished. The whole organization and mode of operation of the economy must be revamped. Individual preferences must be subordinated to the overriding need of the group for survival. But industrial mobilization on a national basis is not enough. International cooperation and coordination are essential too. National economic interests must frequently be sacrificed for the sake of checkmating the enemy.

To convert a war economy to a peace economy is a task no less formidable. Productive resources must be directed to new lines of effort. Resources must be redistributed in their uses. To achieve a reasonably prompt transition from war to peace, and to make the change-over with a minimum of friction and waste, a well-articulated program and concerted effort are necessary. Laissez faire and nationalism will not do. The demobilization and reconversion of industry can no more safely be left to the chance outcome of helter-skelter activities of private groups than could industrial mobilization for war.

To concede this is not to accept the contention of the economic planners that free markets are outmoded. It is only to recognize the radically different nature of the problem of economic direction in war and in peace. The conditions surrounding adjustment of the

economy from peace to war and back again are in no sense comparable to those that producers and consumers encounter year in and year out in time of peace.

Regimentation is indispensable for helping men carry on in the face of such portentous changes as those involved in industrial conversion and reconversion. But, at least for America, it remains unproved that under conditions of peace unregimented men and women cannot take in their stride the adjustments required for continual adaptation to such changes as invention, fashion, the weather, and other variables introduce. The concession that free markets are a poor instrument for reorganizing an entire economy quickly by no means prejudices the case for their efficacy as economic regulators in a period of gradual change.[13] A steam shovel may be a better implement than a spade for cutting through a mountain, but it does not follow that it is a better implement for gardening.

### *Problems of Reconversion in the World Economy*

In the transition from war to peace three sets of problems closely related to cartel policy confront the victors. First, to what extent shall the defeated nations be deindustrialized? Second, how shall the victor governments dispose of their own war plants? Third, what policy shall be pursued in reviving industries temporarily cut off from world commerce by the war? Policy in these matters will directly affect the extent to which industries will be plagued by surplus capacity in the postwar era.

### *Deindustrialization: The Case of Germany*

Before World War II, Germany led in the production of synthetic nitrogen, synthetic rubber, aluminum, and magnesium, and was the largest exporter of chemicals. It ranked second as a producer of iron and steel products.[14] The program the victorious Allies are now trying to put into effect under the Potsdam Agreement aims to limit or destroy German productive capacity in many basic industries.

The principal objectives of Potsdam were to demilitarize Germany, to collect the maximum practicable amount of reparations,

13. Alfred Marshall was a sage as well as an economist; for the motto of his *Principles* he took: *Natura non facit saltum* (Nature makes no leap).

14. German producers also played a major role in the organization and administration of cartels in each of these fields.

but to leave Germany with sufficient natural resources and productive facilities to support a standard of living not exceeding the average standard of continental Europe during a specified prewar period. Although not necessarily incompatible, these different objectives require a delicate balancing of the diverse claims or interests they each express.

In accordance with these principles, the occupying powers have taken steps to destroy Germany's industrial potential for the production of arms, ammunition, accessory implements of war, and every type of aircraft and seagoing ship. The removal or destruction of these facilities is now in progress.

The Potsdam program also calls for stripping Germany of its facilities for the production of primary aluminum, primary magnesium, synthetic nitrogen, synthetic gasoline, and synthetic rubber. The plan is to limit Germany's production of basic chemicals to its domestic requirements. German exports of sulphuric acid, chlorine, calcium carbide, methanol, and other basic chemicals will be prohibited.[15]

Steel is basic, of course, to an industrial economy such as the German. In 1937 Germany produced 21.8 million tons of steel; in 1944, 28.4 million tons.[16] The Potsdam Agreement fixed Germany's allowable production at 5.8 million tons annually, unless the Allied Control Council should specifically permit an increase. The Council has set a limit of 7.5 million tons on productive capacity, a reduction of nearly 75 per cent from 1944.

Germany's loss of capacity in this and other fields will not be a net loss to the world economy. Much movable equipment is being transferred to other countries for reparations.[17] But German industry is, or was, a closely integrated productive system. It cannot be dis-

15. See "Progress Report on Reparations," an official press release from Berlin, February 2, 1945, and "German Industry Is Curbed Sharply," a Berlin dispatch to the *New York Times*, March 29, 1946, p. 10.

16. See *Iron and Steel*, War Changes in Industry Series, Report No. 15, U.S. Tariff Commission, Washington, 1946, p. 160.

17. Germany's loss of territory will also account for a part of its loss in productive facilities. Moreover, the Potsdam Agreement itself is subject to revision. At the Moscow Conference in the spring of 1947 Molotov proposed to double the permissible output of the German steel industry. But this proposal was contingent on several conditions not acceptable to the Western powers. See *The Economist* (London), March 22, 1947, p. 407; April 12, 1947, p. 542. Later, after merging the British and American zones, the Western powers independently raised the allowable output, and thereby automatically reduced the amount of capacity to be dismantled. *Ibid.*, September 6, 1947, pp. 389-90.

membered and its separate parts fitted into the economy of other countries without loss of efficiency. The further destruction or removal of German industrial facilities will inevitably diminish world productive capacity somewhat. This alone, considered from a strictly business point of view, will probably reduce somewhat the severity of postwar competition. It may also lessen the pressure for cartelizing postwar world trade. But here again the gain—from a business point of view—will not be net. From a strictly economic point of view, the dismemberment of German industry cannot be considered a gain at all.

The destruction of Germany's productive facilities is, of course, bringing about lower living standards for Germans. It may also bring about a reduction in living standards for the non-Germans with whom Germans customarily traded. The adverse effect on the income of other European countries is likely to be especially marked, as Germany not only sold heavily in European markets but also was a heavy buyer of Europe's products. It remains to be seen whether Germany's European hinterland can be integrated into the Russian economy without a loss to the hinterland, and whether Germany's northwestern European neighbors can with advantage reorient their economies in a world of increasing complexity. It is doubtful that the industrial countries of central and western Europe will gain as much from the elimination of German competition in neutral markets as they will lose from the strangulation of their trade with Germany.

### *Effects of Throttling German Production*

Although the Nazis strove mightily for economic self-sufficiency, they failed to achieve it. In 1938 German exports amounted to $2,117,000,000; imports were even greater, amounting to $2,195,000,000.[18] Of all European exports, Germany contributed one fifth; of imports, it took a sixth. More than 40 per cent of German exports went to industrial Europe; nearly 30 per cent of its imports came from the same quarter. Indeed, so closely was Germany tied in with the European economy as a whole that no less than 59 per cent of its total imports came from Europe and fully 72 per cent of its total exports went to Europe. The disappearance of German competition

18. See *The Network of World Trade*, League of Nations, Geneva, 1942, pp. 38-39.

in world markets will inevitably tend to reduce the volume of world trade. It is bound to reduce most drastically the volume of intra-European trade. Trade is a two-way street; closing an exit also closes an entrance.

Determined though the victors are to throttle Germany's productive capacity, it may be doubted that the program will succeed in permanently arresting Germany's economic growth. Even assuming no further lopping off of Fatherland territory than now projected, Germany will have lost 25 per cent of its arable land. In its newly restricted area approximately 70 million people will have to live somehow. Though the standard of living set for them is low—relative not only to their prewar standards but also to those of other civilized peoples—it is doubtful whether even this level can be maintained without a revival of German foreign trade.

The Allied governments could themselves maintain a subsistence minimum for the German people by subsidies. Actually Great Britain and the United States, at least, if not France, have been subsidizing the populations of their zones of occupation, and a large part of the burden has fallen, directly or indirectly, on the United States. Both the British and the American people are beginning to tire of feeding Germans with little or no prospect of collecting enough reparations to cover the continuing drain so long as Germany remains divided, cut off from foreign trade, with its industries prostrated. The British Government in particular has found the costs of occupation and German food subsidies unbearable and increasingly insists on a relaxation of the restrictions on Germany's production and trade.[19] Since the administrative unification of the British and American zones the United States has likewise been seeking relief from the heavy financial burden of alms to a vanquished enemy.[20] Moreover, the Germans are an energetic people, no more content to play the role of pauper than Americans are to play the rich uncle. With the food ration in many of the most popu-

19. See *The Economist* (London), March 8, 1947, pp. 315-16; March 15, 1947, pp. 362-64; April 12, 1947, pp. 521-22.

20. *Ibid.*, April 19, 1947, p. 576. Among other evidence of the growing American endeavor to revive Germany and lessen the burden of its support on the American taxpayer is the constitution of the Economic Commission for Europe under United Nations auspices. The United States sponsored this promising venture in European reconstruction. See *ibid.*, March 15, 1947, p. 368. Later events made it necessary to step up the timetable, and the United States came forward with the Marshall Plan.

lous districts of Germany at the slow-starvation level, German protests are daily mounting—and production declining.[21]

In the spring of 1947 it is too early to state with certainty what the long-run effect on world income will be of the impairment of the productive capacity of defeated Germany. However, it is safe to conclude that over the near future the Potsdam policy—stripping the most productive nation in Europe of a large part of its industrial potential—compounded by the divided councils of the victors will continue adversely to affect the world's output of sorely needed goods and services.

It is even more difficult at this time to determine the precise effect that the war, reparations, and the peace will exert on Japanese productive capacity. Apparently the destruction wrought on Japan's productive apparatus was relatively greater than on Germany's. Moreover, the fragmentary accounts coming through suggest that the postwar deindustrialization of Japan is being carried out in a more vigorous fashion.

But despite the devastating effects of the war and the subsequent peace-that-is-no-peace, productive capacity in numerous war-expanded industries of the victorious nations is likely to exceed normal peacetime requirements.

### *Reconversion and Excess Capacity: Rubber*

The solution of the problem of excess capacity in the victorious nations depends in part on the broader problem of maintaining a high general level of economic activity. The relation of cartels to this aspect of the problem is discussed elsewhere in the present volume. The solution also depends, in part, on the problem of so guiding the reconversion program as to reduce excess capacity and prevent its wanton re-creation. How reconversion policy may influence industrial equilibrium and thereby the pressure for cartels may be illustrated by brief consideration of probable postwar demand-supply relationships in selected industries. Reconversion policy might help either to generate or to forestall cartel schemes in, for example, the rubber, tin, and aluminum industries.

21. See dispatches in *New York Times,* March 30, 1947, pp. 1, 38; May 13, 1947, pp. 1, 15, and p. 16. In the dispatch last cited, the *Times* correspondent reported that in one Ruhr city adults had been receiving for a week a daily average ration of 650 calories.

The American synthetic rubber industry is a war baby grown to a giant. Since Pearl Harbor a new domestic industry has developed that can produce a million tons of synthetic rubber annually, over 50 per cent more than American annual average rubber consumption in prewar years. With the output of far eastern plantations added, the prospect is for a world supply of rubber nearly twice as great as the prewar consumption of about 1.3 million tons a year.

If all these productive facilities are fully utilized, rubber output will, in the long run, almost certainly depress prices below levels yielding any return on the invested capital. Such a development could be interpreted (actually, misinterpreted) as the outcome of "destructive competition." In all likelihood the "ruinous" prices would provoke demands for "orderly stabilization" of markets through collaborative arrangements. Proposals to divide markets, restrict output, and maintain "fair" prices would, in these circumstances, meet with a warm welcome from most producers and might well enlist the support of nonindustry elements, particularly in rubber-producing countries.

If agreement on a general policy for the postwar rubber industry could be attained in advance, however, it might be possible to provide for socially constructive competition. The sustained prosperity of the industry need not be imperilled if the governments that found it expedient either to expand synthetic capacity or to foster plantation output were to take forehanded measures to prevent the wastes accruing from surplus capacity. But in a democracy it is difficult to make plans for handling specific problems before these problems have became acute. And by their very nature democratic governments can give no assurance to investors, or the public generally, that a policy once formulated will be unswervingly followed.

In this instance, as elsewhere, public policy must concern itself with diverse and conflicting interests. Should the American Government seize the opportunity that the fortunes of war have presented to maintain a synthetic rubber industry adequate to supply all domestic requirements? Should it regard synthetic rubber facilities primarily as a means to national security? Or should the government's chief aim be to protect consumers' interests in cheap rubber? The relative importance attached to these various considerations will obviously exert a great influence on American rubber policy.

Regardless of the precedence ultimately given these aims in shaping policy, the administration has already committed itself to the sale to private investors of some of the plants built with public funds.[22] The bidders for these properties are entitled to know in advance how far the government intends to go in protecting the value of the assets it is selling. No prospective purchaser intending to use the facilities to produce synthetic rubber or its components can intelligently bid on these plants without at least some inkling of public policy on the question. The Inter-Agency Policy Committee on Rubber recommended that the government give private industry the necessary encouragement or protection to assure the maintenance of actual operative (not stand-by) capacity for the domestic production of at least 250,000 tons of GR-S type (general purpose) rubber annually. The administration approved this recommendation, but government rubber policy hangs in suspense until Congress has acted. Does it contemplate dropping, or minimizing, considerations of national security and looking to natural rubber plantations abroad as the main source of future supply? Or does it propose to safeguard the country's military strength, come what may, and forbid imports of crude rubber, whatever the cost may be to consumers? Or is it planning to steer a course somewhere between these two extremes? If so, where specifically does the middle course lie?

### *Argument for National Self-Sufficiency*

If the United States were to seek self-sufficiency in rubber, a high tariff would probably be the simplest way of achieving it.[23] However-

22. See *First and Second Reports of the Inter-Agency Policy Committee on Rubber*, Washington, July 22, 1946. According to the War Assets Administration (letter to the authors) it had sold by the end of the year one copolymer plant and a number of others the government built to manufacture catalysts, furfural, butadiene, and styrene. Whether the buyers planned to continue to use these plants for the purpose for which they were constructed is not known. But obviously they could have afforded to pay more than they did if Congress had previously taken favorable action on the recommendation of the Inter-Agency Policy Committee on Rubber that a domestic synthetic industry be safeguarded.

23. Demand for a tariff has thus far been slight. It may become greater after sales of some of the government plants have increased private vested interests. Rubber self-sufficiency would be inconsistent, of course, with the general tariff policy Congress has followed in recent years. The Inter-Agency Policy Committee on Rubber opposed tariff protection for the industry partly on this ground but mainly because of its inflexibility. Instead, the Committee recommended a combination of subsidies and legislation requiring the use of specified percentages of synthetic rubber in various categories of rubber end-products. *Ibid.*, pp. 73-74, 80. With a Republican majority in Congress, however, one might expect strong support of a protective tariff on natural rubber.

ever, international cartel arrangements embracing the synthetic and natural branches of the industry and reserving home markets to domestic producers would also do the job. Either approach would reduce the supply of dollars available to foreigners and thereby restrict American exports in general. Cutting off the American market would be particularly disastrous to British, Dutch, and native growers in the Orient, for they have depended on American rubber purchases to give them the foreign exchange that spells a return on their investments and enables them to pay for the imports necessary to sustain their own standard of living.[24]

If American domestic needs for rubber can be more economically supplied in whole or in part by imports, restrictive programs will also have an adverse effect on the American economy.[25] If we do not

24. In 1939 rubber accounted for more than 45 per cent of the value of all Malayan exports and 30 per cent of Netherlands East Indies exports.

25. Whether American synthetic rubber can compete with natural rubber in unprotected markets is not yet clear. In the first months of operation the cost of producing synthetic rubber was far higher than prewar prices for natural rubber. However, by February 1945 the average cost of Buna S (GR-S) rubber produced in government plants was down to 30.7 cents a pound. This compares with an average New York price of 22 cents a pound for natural rubber in 1941. The government's cost figure included no allowances for governmental administrative expense, interest on investment, plant amortization, research, or sales expense. War-inflated alcohol prices were a large part of operating costs.

Progress in cost reduction appears to have been rapid, however, with the accumulation of experience in processing techniques. By the end of 1945, in the government's lowest-cost project, which used petroleum as a source of butadiene, the cost of GR-S, the general utility synthetic, was only 10.9 cents a pound. The Rubber Reserve Company has estimated that plants using petroleum as a source of butadiene could produce this type of rubber in the proximate future, using presently known techniques, at a cost of from 9.4 cents to 10.7 cents a pound, with butylene (the starting material) selling at from 4 cents to 10 cents a gallon.

Although the average New York price of crude rubber in 1941 was 22.2 cents a pound, in 1932 it was only 3.4 cents. However, the 1932 price was probably well below total cost of production, and that of 1941 substantially above it. In 1934, according to the Department of Commerce, the cost of producing rubber on the estates ranged from 3.6 cents a pound to 8.4 cents. These costs include no return on invested capital but cover depreciation and amortization in addition to direct operating costs. A British survey indicates an average all-in cost of about 13 cents a pound in 1940 for a representative group of Malayan plantations. But *The Economist* in September 1945 forecast 2½*d.* as a reasonable cost goal for well-managed estates and about double this amount (or, say, 7 to 8 cents in American currency) as a profitable price level for the plantation industry.

Competition is likely to lower the cost of both synthetic and natural rubber in the postwar era. Synthetic rubber technology is still young. Progress has been rapid, but it may slow down. At least one competent student estimates that some producers could make profits selling the natural product for around 4 or 5 cents a pound. It is unlikely that such a price for synthetic rubber would fully cover its total cost, together with a return on invested capital.

Of course, consumers do not purchase rubber on a basis of price alone. They compare qualities. The properties of synthetic rubbers vary considerably among different classes —*e.g.*, Buna S, Buna N, Butyl, Neoprene—and even within the same class. Many syn-

buy rubber abroad, we will sell less of other goods abroad and employment in exporting industries will decline. This may prove a handicap in the effort to maintain full employment. Rubber was one of our most important imports before the war. It ranked first in value in five of the twenty years 1920 to 1939 inclusive, and lower than fourth in only four years. In 1926, when rubber imports were valued at $506 million, a record, they represented 11.4 per cent of our total imports, and in 1932, when their value sank to $33 million, they represented 2.5 per cent. As recently as 1937 we imported $248 million worth of rubber—8.2 per cent of all imports.[26] These purchases placed buying power in the hands of foreigners with which they could and did buy American goods, thus helping to sustain domestic employment.

The Tariff Commission estimates that full use of existing synthetic rubber plants (including the copolymer plants and the butadiene and styrene plants) will give employment to only about 25,000 persons.[27] As the number of persons employed in relation to the value of the product is less in this industry, on the average, than in exporting industries on the average, shutting out foreign rubber is likely on balance to decrease domestic employment.[28] To the extent that this occurs it will make for lower living standards. If it were to cost 5 cents a pound to protect the American synthetic rubber industry against foreign competition, consumers would pay in the aggregate about $90 million annually over and above what their

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thetic rubbers are superior to natural rubber in their resistance to gasoline, oil, and chemicals. Some are less affected by sunlight and are tougher. For many specialty products, certain synthetic rubbers are markedly superior to natural rubber and in these uses they successfully competed with natural rubber even before the war, when their prices were much higher.

The most important use for rubber is in the manufacture of tires. Butyl inner tubes hold air better than natural rubber, but natural rubber casings have a higher heat resistance. No wholly satisfactory heavy-load high-speed tire made entirely of synthetic rubber has yet been developed. While the quality of synthetic tires has improved rapidly and while the most satisfactory tire may be one that uses both natural and synthetic rubber, in this most important field natural rubber apparently still has a slight advantage over synthetic rubber.

See *Report on the Rubber Program, 1940–1945,* Rubber Reserve Company, Washington, February 24, 1945, *passim;* the Inter-Agency Policy Committee report, pp. 19 ff.; *Rubber* in the Tariff Commission War Changes in Industry Series, *passim;* and *Cartels in Action,* Table 3 and pp. 88-89. Cf. K. E. Knorr, *Rubber After the War,* Food Research Institute, Stanford University, 1944, p. 24.

26. *Rubber,* War Changes in Industry Series, U.S. Tariff Commission, p. 22.

27. This estimate excludes workers making alcohol and the petroleum fractions which are the starting materials of synthetic rubber manufacture.

28. *Rubber,* p. 24.

rubber products would otherwise cost them. This is obviously no way to raise American living standards. But of course no one can predict with certainty that improvements in synthetic rubber technology may not wipe out any cost disadvantage the domestic industry may now be under.

If national security, rather than the preservation of capital values, were to be the paramount aim of American policy a much smaller part of the war-built facilities would have to be kept in operation. The Inter-Agency Policy Committee on Rubber estimated the capacity required for defense at 250,000 long tons.[29] The Committee recommended that facilities to provide this minimum annual output of synthetics be kept in operation regardless of cost, with the assistance of government subsidies if necessary.

### *Synthetic Rubber and the Consumer*

If the aim of national policy is primarily protection of consumer interests, the logical course would be to make synthetic rubber plants pay their own way—if they could. War-built synthetic rubber capacity would be retained then only in so far as it could deliver rubber, in competition with the natural product, at a price sufficient to cover operating costs and keep capital intact. This would probably mean that a large part of the synthetic plants could be disposed of only for junk. If consumer interests were regarded as paramount, the government would erect no barriers to prevent rubber manufacturers from getting their chief raw material wherever they could buy it cheapest. The government would write off the capital costs of its emergency-built plants as part of the war costs. Unless synthetic rubber can be produced at a total cost no greater than the price for which natural rubber can be laid down in the American market, it would be folly to send good dollars after bad, trying to recoup the war-forced investment.[30] If the policy were shaped mainly

29. In the Committee's opinion private production of this amount in the most efficient low-cost facilities would be adequate to protect us against all contingencies, if supplemented by a governmentally sponsored research program, government stockpiling, and a reserve of stand-by plants to bring total capacity to 600,000 tons in an emergency. This would mean preservation of about 60 per cent of existing capacity.

30. This is not to say that, in the circumstances stated, synthetic rubber neither should nor would be produced. As long as the prime cost of making synthetic rubber in the government-built plants was less than the market price for natural rubber, it would be economical to keep the plants operating. And after the capital values had been written down, this would presumably happen, if the plants were in the hands of competitive private enterprisers.

in the interest of consumers, it would forego any attempt to give value to productive facilities through either tariffs or cartel restriction schemes. "The value of the instruments of production should be made to rest upon their satisfaction of a free demand." [31]

Whatever United States policy is to be, Congress should define it as promptly and definitely as it can in order to prevent the development of destructive competition.[32] It will take time and money to bring the far eastern plantations back to their prewar production. It will require the reinvestment of funds, the creation of productive facilities that from the economic standpoint will be new. Business enterprise, in this field as elsewhere, is entitled to know in advance the rules under which it is to operate.

*Revival of Natural Rubber Industry*

The extent of war damage to far eastern rubber plantations is not known precisely, although it is reported as less than was at first feared. Neither the British nor the Dutch invoked a "scorched earth" policy. Nor did the retreating Japanese do so.[33] According to *The Economist,* only about 10 per cent of the trees in Malaya were destroyed.[34] The damage to growing trees in Indo-China and the Netherlands East Indies was insignificant.

The war dispersed the labor force, however, and the estates suffered from neglect. The jungle grew up again over vast tracts. Moreover, what tools and equipment the British and Dutch did not destroy or remove, the Japanese appropriated. Without appreciable repairs or replacements, transportation facilities deteriorated greatly.

31. Lionel Robbins, *International Planning and International Order,* Macmillan, London, 1938, p. 154.

32. Public Law 24 of the 80th Congress (Chap. 24—1st session), approved March 29, 1947, was the first definite contribution of Congress to clarification of rubber policy. It does not represent a definitive declaration of policy, but pending permanent legislation it provides for continuance of executive powers over "allocation, specification, and inventory controls of natural and synthetic rubber." It also declares the policy of Congress to preserve synthetic rubber facilities adequate for national defense, and requires the War Assets Administration to withhold from sale, pending permanent legislation, government-built plants with a capacity of at least 600,000 tons annually. The Resolution authorizes the continuance of government stock-piling operations, but eliminates "import control of natural rubber."

33. It would have been a difficult policy to apply to millions of *Hevea* trees, which do not burn readily. The labor task of cutting them individually would have been tremendous.

34. *The Economist* (London), September 29, 1945, pp. 456-57; see also *ibid.,* February 9, 1945, p. 228, and February 23, 1946, pp. 299-300. The rest which the *Hevea* trees have had will temporarily increase their productivity.

F. A. Ascoli, managing director of the Dunlop Rubber Company's plantations, has estimated that the cost of rehabilitation will average from 3*d.* to 4*d.* a pound on a "potential crop for a full year." [35] This would amount roughly to $150 million.

In Malaya, reconstruction with government assistance was under way in 1946. The British Government laid down its general policy on rehabilitation of private property in enemy-occupied areas in June 1942, when the Colonial Office announced:

> It will be the general aim of His Majesty's Government after the War that, with a view to the well-being of the people and the resumption of productive activity, property and goods destroyed or damaged in the Colonial Empire should be replaced or repaired to such an extent and over such a period of time as resources permit. If the resources of any part of the Colonial Empire are insufficient to enable this purpose to be achieved without aid, His Majesty's Government would be ready to give what assistance they can in conjunction with such common fund or organization that may be established for postwar reconstruction.[36]

Realizing that the world demand for rubber will be abnormally strong in the early postwar years and that the American market in particular can readily absorb large quantities of natural rubber, plantation owners are energetically restoring their estates.[37] Naturally, they have a strong interest in forestalling further development of the synthetic rubber industry, if they can. The estate owners have organized the Malayan Rubber Estate Owners Co., Ltd., to insure a fair distribution of available goods and services. At the same time, the corporation is endeavoring to concentrate production in order to utilize limited supplies and services most effectively. The Malayan plan indemnifies owners who defer rehabilitation of their estates. It contemplates temporary concentration of labor and

35. *Ibid.*, September 29, 1945, p. 457.
36. *Ibid.*, October 13, 1945, p. 529.
37. Some estimates of annual automobile production in the United States for the next few years run as high as 6 million cars. The replacement market for tires was greater in 1946 than it had ever been before. At the end of 1946 America was expected to afford a ready market for some time for all the rubber that could be imported and that our synthetic rubber industry could turn out.

The Inter-Agency Policy Committee on Rubber estimated that 900,000 long tons of natural rubber might be available in 1947, of which the United States could probably get half. Later the Department of Commerce published a more optimistic estimate: 1,200,000 long tons of world exports, of which the United States might obtain 680,000 tons. See *Industry Report: Rubber*, Department of Commerce, Washington, March 1947, p. 6. By the late spring of 1947, reports suggested that tire manufacturers were catching up with the demand. Price cuts were being announced.

equipment on the most advantageously situated plantations, thus expediting resumption of shipments. The government has accepted primary responsibility for rehabilitating holdings of less than 100 acres.

*Private Capital Entitled to Know the Rules of the Game*

British "venture capital," with government assistance, is again flowing into the natural rubber industry. American venture capital is flowing into the domestic synthetic industry. To prevent the rise of surplus productive capacity[38] and ruinous competition, which may lead to a demand for controls, to protect vested interests, the interested governments are morally obligated to set forth as definitely and as promptly as possible the rules of the game under which private enterprise is to operate.[39] Sound social policy can scarcely countenance stimulated and uncontrolled expansion of private investment in both branches of the rubber industry, with rival governments standing by to protect the investments of their respective nationals should competitive prices fail to yield the expected return on capital. If private investors are entitled to receive such profits as favorable conditions may bring in the rubber industry, they should be prepared to assume the risks and bear the losses. But they are entitled to know in advance how public policy affects risks.

Whatever the rules of the game—whether rubber is to sell in free markets or is to be protected by control schemes—the British and the Dutch would be well advised to use discrimination in the development of their rehabilitation programs. Not all rubber plantations can operate with the same efficiency. It would be a mistake to encourage revival of the less efficient productive units. The far eastern governments, whether independent or colonial, should try to pro-

38. Surplus capacity means so large a capacity that it is impossible in the long run, under competition, for producers to sell as much rubber as will be produced at a price high enough to cover the total unit cost of producing it, including a normal return on capital.

39. The Inter-Agency Policy Committee on Rubber took a different view of this matter. The Committee was apparently more concerned with national exigencies than with the international economic problem. It recommended private ownership and operation of an American synthetic rubber industry, but it made no commitment, and did not ask Congress to make an early commitment, concerning government support. "It is the view of this Committee that it is not necessary at this time to recommend a particular type of support for the long range, since it would be unwise to enact such legislation until future circumstances demonstrate that synthetic rubber cannot compete with imported natural rubber." *First and Second Reports of the Inter-Agency Policy Committee on Rubber*, pp. 80-81; see also pp. 30-32.

mote lower production costs through continuing research and the introduction of improved techniques and more efficient administration. Rubber authorities have suggested that production costs could be lowered appreciably by retiring plantations with old trees that have passed their prime, by merging smaller estates, and by a thorough reorganization of the expensive directorate and agency system. Capital that flows heedlessly into rubber obviously has no claim to protection.

Perhaps the most promising way of assuring development of the industry along economical lines is to formulate rules by which the industry can be guided and principles to which it can safely conform. The formulation of such rules and principles would require international cooperation. The appropriateness of any course the British and Dutch Governments pursue in reviving the plantation industry will depend on the rubber policy the United States adopts. If the British and Dutch Governments, without consulting the United States, were to encourage their nationals to rehabilitate and expand the colonial plantations, and then the United States, consumer of half the world's rubber, reduced its rubber imports drastically, in the interests of national defense, the results might be disastrous for the plantation owners. If, on the other hand, again without consulting the United States, the British and Dutch Governments discourage repair and restoration of the plantations and foster a more diversified agriculture, and then the United States should decide in favor of a free rubber market, the results might also be unfortunate not only for the East Indian plantation owners and natives, but also for American consumers.

Similarly, any policy the United States might independently adopt toward the synthetic rubber industry could easily defeat itself if the British and Dutch were to follow a different policy. Suppose, for example, the United States were to throw overboard its costly experience in developing synthetic techniques and junk the expensive facilities built for applying them, only to find itself up against the extortionate exactions of a grasping rubber cartel—as after the first world war. Vital economic interests of the United States would be impaired and it would be in a poor position to remedy the situation.

Suppose, again, that the United States elected to preserve hemispheric independence at all costs and, without consulting the British

and Dutch, committed itself to the protection of domestic synthetic rubber producers against all contingencies, while depending on South and Central American rubber cultivators to supply it with minimum natural rubber requirements. If the British and Dutch Governments then decided to encourage rubber cultivation by active promotion of technical research, and by rationalization and reorganization of the colonial plantation economy along free competitive enterprise lines, American consumers might easily become the victims of their government's maladroit dabblings in autarchy. American consumers might have to pay heavily for subsidizing an industry that, as events turned out, would better have been abandoned.

Neither laissez faire nor economic nationalism is adequate to the situation in rubber. Either is likely to engender a surplus of productive facilities, and ruinous competition or control schemes designed to avoid it. Surplus capacity in the postwar rubber industry can be avoided only by foresighted international action that coordinates the policies of all rubber-producing countries. Mutual accommodation is especially necessary among the British, Dutch, and United States Governments. It would help to avoid both the re-establishment of rubber plantations that no longer exist as going concerns, and the overvaluation of synthetic rubber plants that were built to meet a war emergency.

The problem in rubber is definitely not cartels or chaos. The real problem is one of formulating a long-range, world-market policy on rubber early enough to forestall the dilemma of cartels or chaos. If policy is to be shaped primarily to serve consumer interests, socially constructive competition might well be its method.

*Preventing Trouble in Tin*

As with rubber so with tin: a governmental policy designed to prevent the reappearance of excess capacity might prevent or mitigate the ruinous competition cartel proponents fear. In the five-year period 1936–1940 the leading industrial countries consumed each year an average of 170,400 tons of virgin tin.[40] World mine produc-

40. Knorr, *op. cit.*, Table VII, p. 302. Consumption figures are rough estimates. Except for the United States they are based on net imports plus domestic production, if any.

tion in 1941 was about 245,000 tons, a record.[41] It is clear that mining capacity in the prewar era was well in excess of consumption.[42]

The war greatly stimulated tin production in areas accessible to the United States and Great Britain. After the Japanese had cut off far eastern supplies, the Belgian Congo and Nigeria increased their output sharply. Shortages of machinery and manpower prevented any increase in Bolivian production.[43]

World tin-smelting capacity before the war was about 350,000 tons a year, or about twice average annual consumption. About 45 per cent of capacity was in British Malaya, and the United Kingdom and Holland accounted for nearly 40 per cent. The remaining 15 per cent was distributed mainly among the Netherlands East Indies, China, Australia, Belgium, and the Belgian Congo. To meet war needs, Great Britain and the United States were forced to expand smelting capacity. The most significant addition to capacity was the construction by the United States of a smelter at Texas City, Texas, with an annual capacity of about 50,000 tons.

### *Prospective Decline in Demand for Tin*

A shortage of tin during the war encouraged the use of substitutes, though displacement of tin began before the war. Electrolytic tin plating has now largely superseded hot dipping, because it makes possible a much thinner coating without reducing corrosion resistance below minimum requirements for certain purposes. A newly developed bonding process has even made possible the use of noncoated metal containers for some liquids. Plastics, glass, and coated

41. According to Knorr, countries represented in the International Tin Control Scheme (ITCS) produced 218,300 tons of virgin tin; other countries, an estimated 23,300 tons. See *ibid.*, Tables II and III, pp. 298-99. The International Tin Research and Development Council has recently estimated 1941 production at 245,500 tons. See *The Economist* (London), March 16, 1946, pp. 426-27.

42. As tin is mined under extremely different conditions, capacity in tin mining is an inexact term. Most of the far eastern production is sluice production (placer mining) from alluvial deposits containing cassiterite—a tin oxide. Bolivian production is lode mining, and although the mines are highly mechanized unit costs are relatively high. The principal far eastern producers use mechanical dredges which operate in artificial lakes. But many relatively small operators still use quite primitive methods. The figures in the text show that the 1941 mine production of tin, most of which was subject to the control of the ITCS, was about 44 per cent more than average annual world consumption from 1936 to 1940 inclusive.

43. See Knorr, *op. cit.*, p. 270. Bolivian production increased from 27,200 tons in 1939 to 42,200 in 1941. It declined in 1942 and 1943.

paper have invaded the container field. Aluminum foil and cellophane have replaced tin foil in many uses.

When tin is once more abundant, it may recapture some of its lost markets. But probably it will never again occupy its former commanding position as a corrosion-resistant material. Nor does its use in bearing metals have a big future, as ball and roller bearings are steadily depriving it of demand for that use. The increasing availability of a variety of cheaper substitutes seems likely to exert a permanent depressing influence on the demand for tin. Availability of substitutes checks price increases. Postwar control schemes must reckon with this cardinal fact.

### *War Damage to Far Eastern Tin Properties*

The extent of damage to far eastern tin-mining and tin-smelting properties was not known a year after V-J Day. A British inspection committee sent to Malaya in the latter part of 1945 reported that it was less than anticipated. Chinese-owned mines throughout southeast Asia, operated by gravel pumping, apparently suffered more than the dredge-operated mines of Malaya. But because they use less equipment, the Chinese can restore their mines more rapidly than larger-scale operators using more machinery.

Dredge mining before the war accounted for a little more than half the total far eastern output. The British report indicates that of the 126 dredges in use in Malaya before the war, 22 are now valuable only for scrap. The committee estimated that only 41 could be in operation by August 1, 1946, and only 87 by June 1, 1947.[44] The report predicted that even if the proposed repairs were made, Malayan production would be only about 90 per cent of prewar by 1949. Restoration will require several years, the evidence suggests, and will cost millions of dollars.[45]

44. The committee also estimated that another 17 prewar dredges might be repaired by January 1, 1948. See Jack R. Hight, "First Official Tin Report Optimistic," *Iron Age* (New York), February 7, 1946, pp. 120-21. A. D. Storke, an advisor to the British Colonial Office on the Malayan tin-mining industry, was the principal author of the report.

Information is not available on the extent of damage to the mammoth smelters of the Straits Trading Company at Singapore and Penang, but a subsidiary of the Consolidated Tin Smelters reported early in 1946 that its 75,000 ton capacity Penang smelter, which the Japanese had used, was reclaimed in comparatively good condition and was ready for operations.

45. *Barron's National Business and Financial Weekly* (Boston) states in its issue of January 7, 1946, that in the Netherlands East Indies nearly half the dredges need

*Postwar Markets for Tin*

Tin mines in the next few years can probably sell all they can produce at a profit. Demand is likely to be insistent. Estimates of consumption in the United States in 1946 range from 90,000 tons to 120,000 tons, compared with average annual consumption of 62,357 tons in 1935–1939.[46] These estimates may be overoptimistic. But if consumption continues at approximately the 1946 rate in 1947, both years may well set new peacetime records, assuming that tin supplies are available.

While the tin industry is likely to be profitable during the period of reconstruction and restocking, shrinking markets are on the horizon as soon as restoration is completed. When manufacturers have once caught up with demand for durable goods, neither experience nor theory offers much promise that the current rate of business activity, and the demand for tin, can be sustained. Bearing in mind the growing competition from substitutes, those authorities may be right who suggest that world consumption may level off at perhaps 150,000 tons a year, or 10 per cent below consumption before the war.[47] Whether they are right or wrong, unless brisk industrial activity throughout the world is maintained, restoration of prewar facilities and retention of war-created facilities presage excess capacity in tin. And excess capacity connotes either ruinous competition or some restrictive scheme to prevent it.

*Restriction of Output or of Investment*

The plight of tin points to the need of collaboration in order to avoid eventual demoralization. Common sense counsels prompt collaboration to prevent profligate creation of excess capacity, rather than intervention later to insure a return on imprudent investments. The object of forehanded action would be to prevent the resurrection of high-cost production units. The means might be a discrimina-

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only minor repairs. Precise figures are not available on the cost of reconstruction. To repair dredges will no doubt cost far less than to build new ones. Dredges are made to order, mostly in California, cost from $1 million up, and must be towed to their destination. From blueprint to operation requires from eighteen months to two years. See *Business Week*, September 22, 1945, pp. 19-20.

46. *Business Week*, September 22, 1945, pp. 19-20. See also *Barron's Weekly*, September 24, 1945. At the 1935–1939 rate per capita consumption in the United States was ten times that of the rest of the world. See Knorr, *op. cit.*, p. 267.

47. *The Economist* (London), October 13, 1945, p. 529.

tive regulation of investments, perhaps through judicious use of the taxing power. But because much high-cost capacity is outside the area of the recent war and is undamaged, such a measure is unlikely to be adequate.

The policy of the tin cartel in setting export quotas and fixing prices has recognized the special interests of high-cost producers. The cartel set Bolivia's production so high that, even with the exceptional price premiums offered during the war, output never reached the maximum. Belgian Congo mines at their wartime peak produced only about 2,000 tons above their usual tonnage. Nigeria did a little better: production in 1941 was 15,000 tons, exceeding usual tonnage by nearly 40 per cent; but in 1942 only 12,000 tons were produced.[48]

An effective program to prevent excess tin capacity must take account of this vested interest in industrial distortion. Such a program might well involve an increase in importance of southeast Asia as a source of supply relative to Africa and South America. It would be economically indefensible to impede this change, and to increase its cost, by trying to buttress the high capital values of certain Bolivian, Nigerian, and Congo mines based on their temporarily advantageous wartime position and the artificial prewar scarcity. Nevertheless, to ease readjustment and to fulfill whatever promises may have been made to the principal wartime suppliers of tin, some concessions in their favor may for a time be in order. It is imperative, however, above all else, that in the temporarily tight market during the postwar transition period high prices should not be allowed to encourage further investment in high-cost production.

For the immediate future, therefore, continuance of government buying through some agency comparable to the Combined Resources Board appears to be desirable. Such buying permits discriminatory pricing that encourages the rapid rise and the expansion of low-cost producers, while at the same time it checks the wasteful upkeep and expansion of high-cost producers. Government buying, if continued, would probably also require a temporary continuation of rationing to smelters and industrial users. An international purchasing agency might supplement price regulation by direct control of investments,

48. Data recently released by the International Tin Research and Development Council indicate that, by 1944, in response to urgent demand, Nigerian production rose slightly to 13,149 tons. *The Economist* (London), March 16, 1946, pp. 426-27.

either on its own responsibility or through the sponsoring governments. A judiciously administered price policy would go far toward accomplishing the same end.

Such a program could reduce the market outlets of high-cost producers and reduce returns on their investments. Disinvestment of uneconomical tin-mining ventures and fostering investment in better-situated areas might reduce the burden of postwar readjustment.[49] It could work out in two ways: by limiting the growth of excess capacity and by temporally and geographically spreading the costs of resource shifting. When low-cost production facilities were again restored, and supply and demand were in balance at prices covering total unit costs of efficient producers, the associated governments could relax their controls.

The political obstacles to this type of international planning are immense. The economic difficulties are not less formidable. Bolivian interests, for example, both government and private, would probably resist the sacrifice the program might require of them, even though they agreed it was in the best interests of the tin economy as a whole. However conscientious its sponsors might be in framing the program with regard for the general welfare, difficulty would arise in convincing those with vested interests in the status quo that justice and economy would not be better served by other arrangements. Nor would it be easy to enforce the program. Bootlegging and black markets might develop on a menacing scale, for tin is very valuable in proportion to its bulk.

The pitfalls in such a method of industrial control are unquestionably great. Moreover, difficulties would multiply with the passage of time. Low-cost beneficiaries of the plan might relax their efforts to maintain efficiency and gradually become high-cost producers. New sources of supply might be uncovered, or new techniques and materials developed, and if experience is any guide, administrative authorities would be slow to take account of them. The record does not encourage more confidence in administrative decisions than in cartel arrangements.

Centralized purchasing, authoritative price regulation, and direct

49. This argument premises the continuance of peace. If another world war comes, of course, it might be advantageous to the United States to have a source of tin supply nearer home.

investment control should accordingly be looked upon only as temporary expedients. They should be discarded as rapidly as the post-war tin market reaches a stage in which self-corrective action has a reasonable chance of preventing ill-advised expansion. In the absence of some such interim program of international cooperation, the short-run demand for tin will almost certainly so far outstrip the capacity of war-depleted production facilities that a runaway market will develop.[50] Soaring prices will spur Dutch, British, Belgian, and Bolivian producers to expand to the limit. With rival governments fostering the movement, a wanton creation of excess capacity will then be in prospect.

If the prospect becomes actuality, pressure for the re-establishment of the tin cartel will be great.[51] The choice for tin is not yet between a cartel or chaos, but it will become so if there is no concerted international action of the sort discussed.

### *A Different Problem in Aluminum*

The effect of war on supply-demand relationships and on industrial capacity varies from industry to industry. The problem of post-war readjustment in aluminum differs from the problems in tin and rubber, even as that of its wartime mobilization differed. Aluminum was under private centralized control before the war. Moreover, it presents no problem of rehabilitating war-damaged facilities. The aluminum problem relates more to the wartime growth of capacity.

50. The tin producers generally appear to be bent on exploiting to the full the advantages of a temporary short supply, regardless of long-run consequences. *The Economist* (London, March 16, 1946, p. 426) reported that Malayan and Nigerian producers had voiced dissatisfaction with official buying prices and were particularly aggrieved at the higher prices Britain and the United States were still paying for Bolivian tin.

Subsequently tin prices rose sharply and a year later the stringency of supplies still continued. According to *The Economist:* "Output of the major producers in 1946 is unlikely to have reached 60 per cent of the pre-war (1936–39) average. Production in Bolivia, Belgian Congo and Nigeria has increased considerably but only small quantities are yet available from Malaya and Netherlands East Indies. Rehabilitation in these two countries has been much slower than was expected . . . stringency is likely to last well beyond 1947." *Ibid.*, April 19, 1947, p. 598.

51. The international agreement expired at the end of 1946. The International Tin Committee early in 1946 drafted recommendations for the cartel's future. *Ibid.*, March 16, 1946, p. 427. The nature of these recommendations is not known. The Committee submitted them in confidence to the governments which are signatories of the existing agreement, and their representatives held a conference at London in October 1946 which set up a Tin Study Group. The Study Group met at Brussels on April 15, 1947 to review the situation and, if possible, formulate a definite program. *Ibid.*, April 19, 1947, p. 598.

Germany's capacity of 251,000 metric tons a year, or about 10 per cent of the world total, offers no problem: under the terms of the Potsdam Agreement it is to be eliminated. Much of Japanese capacity, amounting to 140,500 tons, will presumably also be eliminated, if indeed it is still extant.[52]

The German Vereinigte Aluminiumwerke A. G. owned plants in Austria with capacity of 90,000 tons a year. Whether the Allied Control Council has marked them for "elimination" is not known. Assuming that German and Japanese capacity is scrapped, the world would nevertheless have facilities for the production of 2,071,100 metric tons annually (estimated according to 1944 capacity). Output of that volume would be double 1937 world production of aluminum.

### *How to Assure Cheap Aluminum*

On its face, this doubled capacity would seem to portend ruinous postwar competition. Actually, the postwar problem in aluminum is more likely to be that of assuring consumers a cheap and abundant supply. Before World War II the international Aluminum Alliance, a private arrangement without official sanction, rigidly regulated world sales. Practically the sole seller of primary aluminum in the American market was the Aluminum Company of America (Alcoa). Although Alcoa did not formally belong to the cartel, it informally shared in cartel benefits and obligations through its Canadian affiliate, Alted.[53] Alted's stock ownership in many foreign companies associated with the Alliance reinforced its cartel influence.

At the end of World War II Alcoa and Alted held a position in world aluminum markets even more commanding than before the war. Although the Reynolds Metals Company started to produce primary aluminum during the war, at its close Alcoa controlled 84

52. Data from *Aluminum Plants and Facilities*, pp. 87-90. In addition to the 140,500 tons of primary aluminum capacity in Japan and Formosa, the Japanese controlled capacities of 24,500 tons in Korea and 18,000 tons in Manchuria. These facilities will form no part of the future Japanese economy, but they will probably be available for use under other management. Possibly, also, the Allies will transfer some of the facilities "eliminated" in Germany and Japan.

53. The same small group of majority stockholders who controlled Alcoa also controlled Alted, which was originally an Alcoa subsidiary. In the language of the Surplus Property Board: "The two companies are commonly controlled and are in effect twins." See *Aluminum Plants and Facilities*, p. 89. For a more detailed discussion of the relationship between Alcoa and Alted and the role they played in the cartel, see *Cartels in Action*, Chap. 6.

per cent of privately owned United States capacity. Alcoa also held most domestic high-grade bauxite deposits. With the assistance of British and American subsidies, Alted also greatly expanded its capacity during the war. By 1945 it had become the largest and the lowest-cost producer in the world.[54] When hostilities ceased Alcoa and Alted together controlled nearly 80 per cent of the world's primary aluminum capacity, exclusive of German and Japanese.[55] They owned outright more than 42 per cent of world capacity. Alted, furthermore, had a substantial stock interest in Austrian, British, Italian, Swiss, Swedish, Norwegian, Spanish, and East Indian reduction plants. Most capacity not owned or controlled by Alcoa and Alted belonged to the United States Government.

After eight years of litigation begun by the government, the United States Circuit Court of Appeals decided on March 12, 1945 that Alcoa had monopolized interstate commerce in aluminum in violation of the Sherman Act.[56] The court deferred action on dissolution of Alcoa or divestiture of any of its properties, however, until the effects of the government-plant disposal program on competitive conditions in the industry could be determined. The problem of assuring cheap aluminum is partly one of disposing of government-owned plants under such conditions and on such terms that independent purchasers can compete with Alcoa. But if competition is the goal, it may be necessary to dissolve Alcoa into several independent units.[57]

54. *Aluminum Plants and Facilities*, Apps. 14, 16.

55. Including the plants on which Alcoa had leases from the Defense Plants Corporation. See *ibid.*, pp. 21-25 and Apps. 6, 12.

56. *U.S.* v. *Aluminum Company of America*, 148 Fed. *2d* 416 (1945). This decision by the Second Circuit Court of Appeals reversed the judgment of the trial court, 44 Fed.Supp. 97 (1944). For further information on the long and involved record of this case, see *Cartels in Action*, Chap. 6.

After the War Assets Administration had sold to independent producers a large part of the aluminum production facilities that the government had built during the war, Alcoa on March 31, 1947 petitioned the court to enter a final judgment declaring that Alcoa "no longer has a monopoly of the aluminum ingot market." *New York Times*, April 1, 1947. Alcoa alleged that it now controls 43.7 per cent of the facilities for production of alumina, 50.6 per cent of smelting facilities, and 48.4 per cent of the facilities in the country for the fabrication of sheet aluminum. Most of the remainder of the country's capacity in the first two of these three branches of the industry is now controlled, according to Alcoa, by either Reynolds Metals Company or Permanente Metal Company. Up to May 1, 1947 the government had not filed its answer to this petition.

57. Attorney General Clark has taken this position. In a report to Congress on September 11, 1945, he stated: "The best answer to the problem [of competition] is the elimination of the tremendous advantage of Alcoa, the fruits of its half a century

*Low Prices a Stimulus to Consumption*

Surplus capacity will be difficult to overcome if the domestic aluminum industry remains a monopoly working hand in glove with a world-wide cartel. Low prices lead to heavier buying of aluminum and high prices discourage it. General Motors at one time used an average of 75 pounds of aluminum per car; on Buicks, 240 pounds. Mainly because automobile manufacturers could get aluminum only from one supplier, who always asked the highest possible price, they eliminated it wherever they could. By 1939 the average amount of aluminum in each automobile made had been reduced to 8 pounds.[58] Had high prices not forced automobile makers to use less aluminum, they would have put into the 2,850,000 passenger cars sold in 1939 more than nine times what they did. The aluminum sales to the automobile industry lost for 1939 amounted to 58 per cent more than the domestic aluminum industry produced. Official investigations have found that manufacturers generally will take much more aluminum in the postwar period than they ever did before if they can turn to several competing suppliers.[59]

*Postwar Prospects of Increasing Demand for Aluminum*

Assuming full employment and a high national income, the Department of Commerce estimates that with primary aluminum at 15 cents a pound, Americans would buy a total of 1.4 billion pounds of aluminum a year. At 10 cents a pound they would buy 1.9 billion pounds. About two thirds of this would be primary aluminum.[60] The Surplus Property Board more conservatively predicts total purchases of 1.6 billion pounds of aluminum a year if primary alumi-

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of monopoly, by subdividing the company into efficient but competing units. Only in such a climate will the aluminum industry be able to operate on a private enterprise basis with the efficient and competent operators, new and old, assured of a fair opportunity to live and thrive. Competition would then be self-sustaining with a minimum of government participation." *Aluminum,* War Changes in Industry Series, Report No. 14, U.S. Tariff Commission, Washington, 1946, p. 16.

58. See *Cartels in Action,* Chap. 6, and *Aluminum Plants and Facilities,* pp. 29, 120-24.

59. See *Hearings on Problems of Small Business,* U.S. Senate, 79th Cong., 1st sess., Pt. XLIX, p. 6206.

60. The Department estimates that primary metal would constitute about two thirds of the total. These figures are for primary and secondary aluminum consumption combined. The Bureau of Business Research of the University of Washington (Seattle) collaborated with the United States Department of Commerce on this study. *Aluminum,* War Changes in Industry Series, U.S. Tariff Commission, p. 13.

num sells for 12 cents a pound; of this total about 1.1 billion pounds would be primary aluminum. While production at this rate would not require the use of the entire capacity, all the privately owned low-cost capacity would be kept running.[61]

The major postwar problem in the aluminum industry is to assure the working of sufficient capacity to keep prices low and buying brisk. By competition, not by keeping facilities idle and increasing price to give unused plants a scarcity value, the aluminum industry can contribute its share to postwar prosperity.

Cartelization in aluminum is the disease, not the remedy. The government, fortunately, has recognized that it can help solve this problem through its plant-disposal program and its antitrust action.[62] A program for increasing sales, rather than for restricting output, offers the best promise of providing a return on the capital invested in wartime aluminum facilities.

Increased sales rather than restriction of output may indeed be the solution of the general problem of war-created industrial capacity. In an economy with a high level of employment, capacity in most industries would probably not be excessive. Industrial mobilization for war undoubtedly created genuine surplus capacity in some lines, for example in shipbuilding. Except in that particular field, much of the excess capacity consists of structures and equipment convertible to other uses. Only to cartel strategists bent on monopoly revenues is it wholly "surplus." But by hindering consumption, control schemes designed to divide markets and raise prices could create the illusion of excess capacity in a great number of industries.

## *America's Problem of Excess Industrial Capacity*

While the war hastened the industrialization of Canada, Australia, India, and part of South America, the United States was the major arsenal of the anti-Axis coalition. The greatest expansion in

61. The Surplus Property Board estimates "total economical capacity" at 1.5 billion pounds, of which the government owns 512 million pounds. *Aluminum Plants and Facilities*, p. 3.

62. The Surplus Property Board is not certain, however, that it can assure effective competition simply by its disposal program. If it cannot, then "unless the courts dissolve or reorganize Alcoa under the Sherman Act, Congress will have to consider whether to leave the aluminum industry under the domination of one company or whether to authorize the Government, either by subsidized or direct operation of key plants, to provide some measure of production that is independent of Alcoa's control." *Ibid.*, p. 6.

basic industries occurred in the United States, partly because of its comparative isolation from the theaters of war but mainly because of the abundance of its resources, its advanced technology, and its labor skills. Some of its resources, incidentally, are now seriously depleted. The increase in production of magnesium, nitrogen, rubber, machine tools, aircraft, and other basic materials and implements of war was greater in the United States in absolute terms than anywhere else. Indeed, in some fields it was greater than in all the other Allied countries combined. In many fields it was also relatively greater. The United States Government, moreover, financed by far the largest part of the war-born expansion of plant capacity.[63]

Some of the government-financed industrial capacity is high-cost and badly located. Though helpful in winning the war and in most cases justified by military necessity, it is not now, from an economic point of view, productive capacity at all.[64] Facilities that cannot cover out-of-pocket costs in competition with private concerns should be scrapped. As private owners during the war increased their capacity conservatively, and under the stimulus of tax concessions wrote down the value of new plant liberally on the books, their capital charges in future should be low—a deterrent to the purchase of government-owned facilities by promoters intending to compete with going concerns.

### *Temporarily Tight Markets in Prospect*

Although the revival of Europe and the Far East is taking place slowly, in America deferred demand, backed by tremendous and widely dispersed purchasing power, is creating an industrial boom.

63. The Surplus Property Board has estimated that in the class of government-owned plants and machine tools which may have to be reckoned as surplus "we will eventually find roughly one-fifth of the nation's [war-born] industrial capacity including 98 per cent of the country's synthetic rubber, 90 per cent of aircraft and magnesium, and 55 per cent of aluminum." Surplus Property Board, Quarterly Progress Report to Congress, Washington, May 28, 1945, p. 12.

64. An illustration is the magnesium plant in Austin, Texas. This plant plus raw material facilities at Carlsbad, New Mexico, cost more than $18 million. It has produced no magnesium since 1944 and probably will never produce another pound. Most of the buildings and equipment at Austin are now under lease at a nominal charge to the University of Texas, with an option to purchase, and are being used for chemical and engineering research. Some of the buildings are housing student-veterans attending the University.

Another example is the aluminum reduction works the government built at Maspeth, New York, with full knowledge of its uneconomic location for operation in ordinary times, to take advantage of an available local electricity supply.

Most privately owned enterprises are currently under a strain to satisfy demand. Until deferred demand in America has been filled and a war-devastated world put on its feet, real excess capacity is likely to be a minor problem.

As production gradually recovers abroad and American exports encounter competition, the problem will be to maintain brisk economic activity all over the world. If that problem is solved, both excess capacity and the clamor for output restriction schemes will tend to disappear. A necessary condition for its solution is the continued prosperity of America's domestic economy, for the United States has become one of the main pillars of the world economic structure.

After a broad survey covering 1925–1929, the League of Nations rated the "relative industrial importance of the United States . . . at 46 out of 100 for all countries, including the Union of Soviet Socialist Republics, or 48 per cent if the U. S. S. R. is excluded." [65]

The United States, furthermore, is one of the largest agricultural producers.[66] The Department of Agriculture estimates that of nine major raw materials and foodstuffs—cotton, wheat, sugar, rubber, silk, copper, tin, tea, and coffee—the United States consumes nearly two fifths.[67] All these commodities, except cotton, have at one time or another been subject to cartel restrictions. But Americans buy far more of these and other goods, even at relatively high prices, when economic activity is brisk than they do at lower prices when business is slack and unemployment prevalent.

To overcome war-born maladjustments with a minimum of disturbance, the primary requirement is an expanding world economy. Because Americans buy such a large part of the exports of other countries, the growth of American imports is necessary to their prosperity. American imports supply foreigners with dollar buying

65. Quoted from *The United States in the World Economy,* Economic Series No. 23, Bureau of Foreign and Domestic Commerce, Washington, 1943, p. 29. For the original computation, see *World Production and Prices, 1935–36,* League of Nations, Geneva, 1936, pp. 21-22. The growth of Soviet industry during the past twenty years may have lowered America's percentage of industrial output but certainly has not changed its international rank. On the other hand, the drastic decline in industrial output in the former Axis countries has probably more than counterbalanced the rapid advance in Russia.

66. *The United States in the World Economy,* p. 29. In 1929 American exports represented 15.6 per cent of world exports and 12.2 per cent of world imports.

67. *Ibid.*

power. An abundant supply of dollars abroad would spur production, increase buying power, and erase excess industrial capacity.

Besides increasing its imports, another way in which the United States could foster a rise in the purchasing power of foreign countries is by expanding its investments abroad or extending financial credits. If American investors could be assured of the political safety of their investments in foreign countries, and if American lenders could be assured that the funds advanced would be used for productive purposes, doubtless they would make available a substantial supply of dollars that would have a stimulating effect on the world economy similar to an expansion of American imports. The growth of industry in economically backward regions not only is compatible with a continued expansion of world trade; it is an effective way of promoting it both immediately and in the long run.[68]

But there are formidable obstacles to increasing the supply of dollars abroad in this way and thus providing an expansive environment within which to work out the problem of war-born maladjustments. Industrially backward regions are, in general, politically unstable and becoming more so. The unsettled conditions in China, India, and certain parts of South America and Africa are not reassuring to investors or lenders. Moreover, the people in many of these regions are not sympathetic to the development of industrialism on the Western model. While the spread of industrialization would invigorate the world economy, it is a disputed question whether, in actual circumstances, increasing foreign investment can be counted on to promote it. According to one school, the prospects are good for an early and vigorous development in this direction.[69] According to another school the tempo of industrialization is not likely to rise much in the near future in such countries as China, India, and the South American republics.[70]

68. The development of industrialism in "colonial" areas changes the pattern of world trade, but it does not retard its growth. Much the greater part of world trade is among industrialized regions. The development of industrial Germany and industrial America in the half century before World War I did not reduce Great Britain's export markets; it expanded them. Germany and the United States became Britain's best customers at the same time that they became its strongest competitors. See Chap. 1.

69. See, for example, Eugene Staley, *World Economic Development,* International Labor Office, Montreal, 1944; J. B. Condliffe and A. Stevenson, *The Common Interest in International Economic Organization,* International Labor Office, Montreal, 1944; and Theodore H. White, "China's Post-War Plans," *Fortune,* October 1943, pp. 151 ff.

70. See Norman S. Buchanan and Friedrich A. Lutz, *Rebuilding the World Economy,* Twentieth Century Fund, New York, 1947.

Whatever happens in this sphere is in the lap of the gods. Much will depend on the success of the United Nations in eliminating the fear of war and promoting political concord and civic tranquillity. In an atmosphere of international good will and mutual trust, industrialization of economically backward regions might go forward by rapid strides. If it did it would have a buoyant effect on the world economy and weaken the incentives to cartel schemes for restricting output, allocating markets, and fixing prices.

*Aids to the Reallocation of Resources*

The United States was not responsible for the war, but because modern war is total war—an industrial contest no less than a military struggle—it had to, and did, bear a large part of the responsibility for victory. Similarly, the United States is not responsible for the reconstruction of the world economy for peace. But because the world economy is an interdependent complex and the United States is such an important factor in it, America must take much of the responsibility for overcoming war-born economic maladjustments. As the principal creditor nation, with a major part of the world's productive capacity, it can either ease the restoration of balance in the world economic structure or aggravate its imbalance.

If the United States gears its own economy to an expanding world trade, it can do much to swing the sentiment of other countries toward reciprocal policies for opening up markets, facilitating trade, and encouraging production. If, on the other hand, this country shuts itself off from trade with the rest of the world and tries to lift itself by its own bootstraps, other countries are likely to follow a similar course. In place of all countries endeavoring to develop their productive powers to the maximum, each would try to safeguard its vested interests in particular industries—including those overexpanded by war demands. The situation would be ripe for wholesale resort to cartels.

The choice for the United States is not between cartels and chaos. Given political ingenuity and economic foresight, that choice can be avoided. These qualities of statesmanship being assumed, the choice —if it could be called a choice—lies between correcting war-born maladjustments by fostering economic expansion or preserving them by sanctioning economic restriction. Competition spurs expansion.

Cartels spell restriction. The advantages of an expanding economy for increasing the mobility of resources and easing the pains of adaptation can hardly be overemphasized. The United States cannot force other countries to forego restrictionism. But it can give them a strong inducement to avoid freezing the economic distortions that the war brought about.

An expansion policy would work better if supplemented with auxiliary machinery for moving resources from war-inflated industries to relatively underdeveloped industries. In the absence of a deliberate policy of redistributing resources, the costs of their reallocation are usually localized and the benefits widely diffused. Here again the United States cannot coerce other countries to go along with it. But it can set an example and it can use its diplomatic influence to solicit parallel, or even cooperative, action. The United States could adopt domestic policies that would facilitate shifts in the use of productive factors to effect a better economic balance.

A flexible price policy will increase mobility of the factors of production. Relatively low prices will accelerate the process of reconversion. They will tend to increase consumption of the products from overdeveloped industries. But they will do more. For in a business enterprise economy low prices provide a potent leverage for displacing resources from unpromising fields. They discourage high-cost producers, make them look elsewhere for better opportunities.[71]

### *Pitfalls to Planned Expansion*

Nothing will be gained by ignoring the fact that, whatever expedients the United States adopts, either independently or in association with other nations, the administrative obstacles to effecting a planned reallocation of resources are certain to be formidable. Among the questions that arise are: What amounts to "excess" capacity in any given industry? What specific resources out of the total found to be excessive should an administrative agency seek to

71. Moreover, the government may lighten the burdens of readjustment by assisting those who lose their jobs—through training and rehabilitation programs, improved machinery for bringing men and jobs together, social insurance legislation, and similar measures. It may also stimulate transfers to higher-paid employment by abolishing restrictive trade-union rules, by equalizing educational opportunities, and by setting higher standards of education. See A. G. B. Fisher, "Full Employment and Income Inequality," *Economic Journal*, March 1946, pp. 18-28; and Staley, *op. cit.*, especially Chap. 11.

transfer to other fields?[72] What would be proper compensation for making the desired transfer? When should the agency withdraw such inducements? How finance such a program?

These questions suggest the difficulties involved in reallocating resources by redistributing costs. Policy will have to take account of the limitations imposed by existing institutions and established traditions. Those countries that customarily rely mainly on the price system to organize resources and guide production would do well not to interfere too vigorously with its operation, though caution in this respect does not preclude, indeed it requires, vigilant efforts to prevent private interference with its operation. It is a delicate instrument, and unless they are prepared to abandon it entirely they had best make use of its compulsions and stimuli in redressing the balance in a world economy that the war has knocked lopsided. To eliminate the price system as a guide to use of resources and to substitute cartel decisions on investment and output will not get rid of the lopsidedness. It will only perpetuate war-born distortions in the structure of production.

The basic problem is to get rid of these maladjustments. Public controls may help to ease the pains of transition. But public or private controls that aim at preventing change, as cartels do, only aggravate the world's economic distress. Adjustments are imperative. The costs of moving resources out of unremunerative fields are inescapable. The difficulties of finding new jobs, new markets, new industries, are great. But an attempt to preserve inflated capital values by output-restricting and price-raising devices or to maintain payrolls by subsidizing high-cost producers will only compound the difficulties. A real solution to the problems of excess capacity and economic distortion that the war has posed requires changes in the pattern of production and the growth of demand. Through judicious policies the United States can do much to make the postwar decade an era of economic expansion. International collaboration on such policies would increase their effectiveness. Though a war-weary generation may be content with drift instead of mastery, the challenge of the peace to political and economic statesmanship is clear.

72. In some fields capital resources may be so fixed and specialized that they cannot be transferred except as scrap.

*Chapter 7*

# CARTELS AND ECONOMIC STABILITY

IN MANY flourishing industries cartels have evidently helped sustain prosperity. The light-metal industries, chemicals, and incandescent lamps are examples.[1] Evidently not all cartels are born of distress. The exceptional prosperity of some cartelized industries induces one to ask: May not cartels generally become a stabilizing influence in the industries in which they operate and, secondarily, in the whole economy? May not cartels become useful in preventing imbalance within the economic structure? These questions have two important aspects: (1) the relation of cartels to the volume of income and employment in the economy as a whole; (2) their relation to the business cycle.

## *The Question of Full Employment*

Postwar economic policy will probably be oriented more than was prewar policy toward improving living standards and maintaining maximum possible employment. It is doubtful that democratic government will survive if it does not solve these twin problems.[2]

Although World War II temporarily lulled apprehension over prolonged mass unemployment, the Great Depression everywhere so frightened people that this generation will probably never again

1. See *Cartels in Action,* Chaps. 6-11.

2. See William Beveridge, *Social Insurance and Allied Services,* Macmillan, New York, 1942; *idem, Full Employment in a Free Society,* Norton, New York, 1945; *Economic Stability in the Postwar World,* Report of the Delegation on Economic Depressions, Pt. II, League of Nations, Geneva, 1945; British *White Paper on Employment Policy,* Cmd. 6527, London, May 29, 1944; *Full Employment Act of 1945,* Subcommittee of the Committee on Banking and Currency, U.S. Senate, 79th Cong., 1st sess., Hearings pursuant to S. 380, July 30–September 1, 1945. See also D. B. Copland, *The Road to High Employment,* Harvard University Press, Cambridge, 1943; C. G. Bolté, *The New Veteran,* Reynal & Hitchcock, New York, 1945; *More Production, More Jobs, More Freedom,* Report of the Research Committee, Committee on Economic Development, New York, November 1945; and the symposium on "The Murray Full Employment Bill" in *Review of Economic Statistics,* August 1945, pp. 101-16.

tolerate such institutionally caused misery and despair. The depression made everyone more concerned about human needs and less respectful of traditional institutions. Governments here and abroad undertook to control economic affairs. The United States embraced the New Deal, which endeavored to reform institutions within the framework of political democracy. Great Britain moved to the threshold of socialism. Europe sank into dictatorship and totalitarianism. Economists everywhere reviewed the doctrines on which they had previously relied and began to lay the theoretical basis for a new political economy.

*Steady Investment: A Key to Business Stability*

Most contemporary programs for eliminating unemployment stem from Keynes' epochal study, *The General Theory of Employment, Interest and Money,* published in 1936.[3] Keynes has profoundly influenced economic thought and public policy. Perhaps no other treatise since Adam Smith's *Wealth of Nations* has so significantly affected economic thinking and practical politics. Keynes focused attention on the role of investment and savings in the economic process. While economists disagree on the relative importance of the various factors that will assure a continuously large volume of investment in a business enterprise economy, they all agree that continuity of investment is crucial to the maintenance of economic stability.

But economists also recognize the importance of investment to economic progress. To improve the average standard of living, a community must use its resources more and more skillfully. One of the virtues imputed to a business enterprise economy is that it increases productivity by fostering technological advance and the accumulation of capital equipment. A continuous growth in the amount of machinery and other equipment—called "real investment"—is necessary to assure continuous improvement in living standards.[4] Whether by more intensive or more extensive use of

3. Harcourt, Brace, New York.

4. "Real investment" when it increases may, in the special terms used by R. G. Hawtrey, represent a "deepening" or a "widening" of capital. "Deepening" of capital entails the use of more equipment per unit of output. "Widening" of capital entails the use of more equipment to produce a larger total output but with no change in the amount of capital used per unit of output. "Deepening" takes place when the ratio of real capital to real income rises. "Widening" takes place when both income and real capital increase in the same ratio. See R. G. Hawtrey, *Capital and Employment,* Long-

capital, investment must continually increase if a growing population is to maintain its living standards or a stationary population is to improve them.

Investment requires saving, and saving must somehow offset investment.[5] If saving is defined as nonuse of income for consumption, and investment as the transformation of saved funds into capital goods, the two processes obviously must go forward in step if the economy is to keep its balance. If current investments do not absorb current savings, part of the community's available purchasing power will be idle. When that occurs, part of its productive resources will soon become idle, and at the same time income will fall.[6] Demand

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mans, Green, New York, 1937, pp. 35 ff. See also F. A. Hayek, *Prices and Production*, 2d ed., Routledge, London, 1935.

5. If voluntary savings should be less than investments, as some economists contend may happen, the deficit will be made up through what these economists usually call "forced saving." (For a review of the development of this doctrine, see Fritz Machlup, "Forced or Induced Savings," *Review of Economic Statistics*, February 1943, pp. 26-39.) Some argue that investment in excess of savings can occur only under conditions of full employment—when expansion of bank credit leads to an increase of prices because the growing supply of money is not matched by an increasing supply of goods. Others contend that even in conditions of less than full employment some money incomes, for example wages, may not go up as fast as the general level of prices, thus forcing a reduction of real income on these consumers. In either case, the economists who support the doctrine of forced savings believe that investment may proceed for a time, under certain conditions, by a transfer of purchasing power from consumers to businessmen, without deliberate decision of individual consumers to save.

Keynes denied the validity of the distinction between voluntary and involuntary savings (*op. cit.*, pp. 79-84). In his view, all savings are voluntary. He recognized, however, that changes in the volume of savings depend largely on changes in the level of income, rather than on deliberate choices of individuals to save more or less out of a given income. With expanding money incomes, such as a net increase in investments generates, the community will save enough more, he maintained, to match the extra investment.

As Keynes put it: "Every . . . attempt to save more [than the community 'may be investing'] by reducing consumption will so affect incomes that the attempt necessarily defeats itself. It is, of course, just as impossible for the community as a whole to save *less* than the amount of current investment, since the attempt to do so will necessarily raise incomes to a level at which the sums which individuals choose to save add up to a figure exactly equal to the amount of investment." *Ibid.*, p. 84. It may assist the reader in following Keynes' thought to interpolate in the last clause a missing link in the reasoning, so that it will read: "since the attempt to do so will necessarily raise prices and money incomes to a level at which the sums which individuals choose to save add up to a figure exactly equal to the amount of investment."

Joan Robinson states the thesis much more clearly: "The income derived from producing consumption goods is equal to what is spent on them. Therefore, what is saved is equal to the income derived from producing investment goods. In short, the rate of saving is equal to the rate of investment." *Introduction to the Theory of Employment*, Macmillan, London, 1937, p. 9.

6. "In terms of time-period analysis, the community must return to the income stream in each period as much as it received in previous periods, or else there will ensue a cumulative downward spiral of income and employment." Paul A. Samuelson, "Full Employment After the War," in *Postwar Economic Problems*, Seymour Harris (Ed.), McGraw-Hill, New York, 1943, p. 37.

for goods will be less than total supplies at prevailing prices. Prices will decline. Businessmen will have incurred expenses in producing goods, counting on sales prices they can no longer get. Because of the resulting losses, they will curtail production and hence use less labor. The result may be economic stagnation and a decline in national income.[7]

When an economy is devoted to the production of capital goods in great volume, so that a large part of business activity and much of national income depends on the steady flow of savings into investment, it is easily unbalanced. For the investment process is exceptionally sensitive. Capital goods are not bought impulsively. Nor are their buyers much influenced by habit. As a rule, businessmen undertake new projects and enterprises only after carefully canvassing all known factors and considering the possibilities of making a profit.

As profit prospects are always uncertain the demand for capital goods is extremely changeable. But saving habits tend to be rather stable. The volume of savings varies chiefly with the level of income rather than with the rate of interest. The distribution of income also affects the volume of savings. Persons with low incomes save little or nothing. Those with incomes above the average provide a preponderant part of the community's savings.[8] A capitalistic econ-

7. This is not to say that an output drop in one field will inevitably spread out and bring a contraction of income in the entire economy. A dynamic economy experiences continual contraction in some sectors, expansion in others. The expansive forces counteract the contractive forces. Only when the growth of certain industries does not offset the decline of others is the balance of the economy upset, its vitality impaired.

8. This holds true even though individuals in the highest income-tax brackets may become net dissavers if taxation is steeply progressive. In England the income tax on the very rich has been so heavy in recent years that as a group they are generally supposed to be living off their capital in part, instead of living on it.

Corporate savings are the source, especially in America, of a large and increasing part of the total supply of investment funds. But they fluctuate much more sharply than individual savings, because total profits are more variable than the amounts paid out as wages, interest, and fees. In depressions some individuals may even increase the proportion of their incomes saved as incomes get smaller. Insurance policies practically constrain them to keep up the same rate of saving in depression as in prosperity. Or they may elect to cut down their consumption instead of their savings if they are providing for future contingencies, such as the expense of educating their children. Thus stable savings habits may have a perverse effect on market equilibrium. Cf. Moses Abramowitz, "Savings and Investment: Profits or Prosperity?," *American Economic Review*, June 1942, Supplement, pp. 53-88, especially p. 61.

Moreover, the growing preference for liquid funds as prices fall and trade slackens affects the investment market in two ways. Directly it cuts down the demand for capital goods: a large part of such corporate savings as are made are hoarded, while rising interest rates and declining productivity of capital discourage borrowing. Indirectly, the growing preference for liquid funds—cash or its equivalent—tends to

omy requires both a continuously large volume of savings and a correspondingly large and continuous volume of investment to assure full employment. Continuing investment on a large scale is the nub of the problem.

The distinctive feature of Keynes' *General Theory* is his contention that equilibrium may be achieved in the economy with a relatively low level of income and at less than full employment. According to Keynes, the volume of investment does not adjust itself to the volume of savings, because decisions to save and decisions to invest are customarily made by different people and in response to different considerations; so the adjustment comes the other way around—the volume of savings depends on the amount of investment. Keynesians contend that investment depends, not on the willingness of individuals to save, but on the relationship between interest rates and anticipated returns from the use of capital.[9] Thus an increase or decrease of investment has no necessary and direct connection with antecedent decisions of income receivers on how they will use their incomes. Rather, investment forces a modification of patterns of income expenditure because it indirectly induces changes in the volume of income and employment and the level of prices.

### *Significance of Diminishing Investment*

In whatever respects Keynes and his followers may be wrong in accounting for periodic slowing down in the rate at which new investment takes place, or for chronic inadequacy of investment to assure full employment, they are correct in pointing to the invest-

deprive consumption goods markets, too, of some of the purchasing power that ordinarily would be promptly spent. Consumers are likely to hold off the market when prices are falling, partly because they anticipate a further fall of prices, partly because they fear a reduction of their incomes. The declining demand for consumption goods will deter producers from expanding capacity, *i.e.*, from buying producers' goods.

9. Keynes argued that businessmen will expand investment as long as the marginal efficiency of capital exceeds the market rate of interest. According to Keynes, in deciding whether or not to build or expand productive facilities, businessmen will try to calculate the present worth of the revenues which they expect the productive facilities will yield over the useful life of the equipment. In short, they will compare the prospective yield of capital goods with their cost. As long as prospective yield (marginal efficiency of capital) from an investment in particular capital goods exceeds the cost (supply price of the funds for purchasing the capital goods) a businessman will make the investment. Specifically, Keynes defined the marginal efficiency of capital as equal to "that rate of discount which would make the present value of the series of annuities given by the returns expected from the capital-asset during its life just equal to its supply price." *Op. cit.*, p. 135.

ment process as the crux of the problem of maintaining business prosperity and full employment. As one Keynesian has expressed it:

> We are confronted with the paradox that while no one attempts to save with any thought of investment outlets or of offsets, yet the amount which all together succeed in saving is brought into alignment by the movements of income and employment. But the alignment is performed on a cruel Procrustean bed, with employment and income being lopped off if the desire to save is excessive in comparison with available offsets, and with an inflationary straining of demand if investment is excessive.[10]

Accepting this logic, the Keynesians contend that if businessmen do not invest on a scale adequate to insure a large volume of income and employment it becomes the duty of the government to reinforce effective purchasing power by a program of public investment. Hansen, developing a similar thesis, has argued that with the passing of the frontier, the decline in the rate of population growth, and the approaching "maturity" of the American economy, investment opportunities are diminishing relative to the volume of savings that, through habit, income receivers are ready to provide. He holds that a governmentally sponsored investment program and a fiscal policy designed to increase consumer expenditures are imperative if a large volume of income and employment is to be attained.[11] While some economists dispute the logic of the Keynesian analysis and its political implications, all agree that a continuously large volume of investment is essential to maintain full employment and rising living standards.

### *Relation of Cartels to Investment Activity*

Keynes nowhere attempted a detailed analysis of the relation of cartels to the amount of investment.[12] But the general drift of his discussion of the problem of unemployment suggests that he estimated lightly the role of monopoly as a factor in economic stagnation. Nevertheless, monopolistic influences may be largely respon-

10. Samuelson, *op. cit.*, p. 37.
11. Alvin H. Hansen, *Fiscal Policy and Business Cycles*, Norton, New York, 1941, Chaps. 12, 13, and Pt. IV.
12. In developing his thesis, Keynes referred to the "degree of competition" only incidentally. "We take as given the existing skill and quantity of available labour, the existing quality and quantity of available equipment, the existing technique, the degree of competition . . . This does not mean that we assume these factors to be constant; but merely that, in this place and context, we are not considering or taking into account the effects and consequence of changes in them." Keynes, *op. cit.*, p. 245.

sible for the slowing down of the investment process in capitalist economies in recent times. Moreover, the effectiveness of a program of public expenditure for eliminating unemployment may be greatly hampered by cartel practices.

Cartels may hinder investment in two ways: (1) by retarding the introduction of new techniques; (2) by restricting the use or limiting the application of old techniques. Under competition, new firms introduce new processes available to them whenever the new techniques lower the total unit cost of production. Or if the new technique is applicable to production of a commodity not previously marketed, a new enterprise will exploit it when the expected total unit cost of the new product is less than the price buyers will pay.[13] The opportunity for unusually good returns will attract new capital, which will so increase output of the commodity that its price will eventually sink to its cost of production.[14] Meanwhile, however, investment and employment will both have increased.

The tendency for investment to expand employment and raise the national income works under the so-called multiplier principle. Investment in plant and production facilities requires men and materials. It thereby expands employment directly.[15] Once men previously out of jobs are put to work they have more purchasing power, usually leading immediately to an increase in the demand for consumers' goods. Such new demand will tend to increase investment and output in other industries supplying consumers' goods, thereby increasing the general demand for construction services, producers' goods, the raw materials used in production of consumers' goods, and so on all down the line. Investment made to take

13. This assumes, of course, that the new technique is (1) in the public domain, (2) covered by patents owned by the promoters of the new enterprise, or (3) available on definite license terms (so that the royalties may be estimated in computing the prospective total unit cost).

14. Including risk-premium profits. Effective profits, sometimes called uncertainty profits, will be zero. Cf. Oscar Lange, *Price Flexibility and Employment*, Principia Press, Bloomington (Ind.), 1944, p. 75.

15. Essentially, the analysis would be just as valid if no unemployment were assumed. In that case, workers would be diverted from existing employment to jobs in the industry in which the new process is introduced. Production by the new process may permit wages higher than those paid in other employments. Or productivity of labor under the new process may be greater than the going wage rates in defense of which some workers may be involuntarily unemployed. Whether the comparative advantage takes one form or the other is immaterial. In an economy of full employment new investment would increase capital equipment and tend to raise national income in both real and money terms.

advantage of a new process or novel technique can in this indirect way give employment to a far larger number of workers than it directly utilizes. This is known as the "multiplier" principle.[16]

*Tendency of Cartels to Obstruct Industrial Expansion*

New techniques tend to be introduced more quickly under competition than in controlled markets.[17] Monopolists, or the members of a cartel, do not introduce or permit the introduction of a new process if they can prevent it, unless the total cost of production under the new process is less than out-of-pocket costs under the old.[18] If, though the new technique makes possible a total unit cost lower than under the old process, this reduced cost nevertheless remains higher than prime costs before its introduction, a monopolist will not profit by introducing it. It will not pay him because the introduction of the new technique will reduce or destroy the capital value of the old equipment.

Competition tends, then, to lessen or destroy the value of outmoded equipment that is still in running order, monopoly to preserve or enhance it by retarding new investment. Cartels tend not only to restrict the use of new techniques and processes, but to retard

16. Keynes (*op. cit.,* p. 115) defined the investment multiplier as follows: "When there is an increment of aggregate investment, income will increase by an amount which is K times the increment of investment." His explanation of this "law" was tersely epitomized: "Increased employment for investment must necessarily stimulate the industries producing for consumption and thus lead to a total increase of employment which is a multiple of the primary employment required by the investment itself." *Ibid.,* p. 118.

Joan Robinson's definition of the multiplier is simpler (*op. cit.,* p. 20). After distinguishing between the primary increase in employment (in capital goods industries) due to an increase in investment, and the secondary increase in employment (in consumption goods industries), she says, "The ratio of the total increase in employment to the primary increase is known as the *Multiplier.* If, for example, there is an increase in employment of two men in consumption good industries for every man newly employed in capital-good industries, then the Multiplier is equal to 3."

17. This assumes, of course, that those who control the market have the power to block the use of a new process. If they do not, an outsider may introduce it and break the power a cartel may previously have exercised. Cartels generally make it their business to acquire processes that threaten their power.

18. Of course, a monopolist may be able gradually to substitute the new process for the old as old capital equipment wears out. Even so, the introduction of the low-cost process will be slower than under conditions of competition.

Schumpeter would probably dispute this contention. He holds not only that the prospect of monopoly—through patent protection—encourages research and experiment, but that prospective monopoly revenue induces monopolists to introduce new techniques and products that otherwise might not be put into practice or be produced at all. Thus, in his view, monopoly is a stimulant to new investment. Cf. J. A. Schumpeter, *Capitalism, Socialism and Democracy,* Harper, New York, 1942, Chap. 8.

the introduction of new products they control if the new compete with the old. For profits from the new product may be realized, in part, only at the expense of smaller revenues from the old. And the gains from the new may not fully compensate for the losses from the old. In truth, they will not compensate unless the new investment yields a greater rate of monopoly profit than the old.

For example, suppose that a monopolist earns 10 per cent annually on $10,000 invested in facilities for producing book matches, and that funds in the money market are available at 5 per cent. His monopoly revenue is $500, or the difference between earnings of $1,000 on his investment and the amount he could get for the use of his capital in the competitive loan market.

Suppose, now, that the monopolist invents a repeater match the manufacture and sale of which will require investment of $10,000, and that he can earn 10 per cent annually by producing the new product. But the repeater match will compete with book matches.[19] If the rate of return on the book match investment is reduced to less than 5 per cent, it will not pay to manufacture the repeater match at all, even though it promises monopoly returns.

By confining his business venture to book matches, the manufacturer can make $1,000 annually. By lending at the market rate the $10,000 he might have invested in the manufacture of his patented repeater match, he can make an additional $500, or $1,500 in all.[20] But by producing both book matches and repeater matches, total earnings would fall to less than this amount ($1,000 annually from the manufacture of repeater matches and something less, probably much less, than $500 a year from the book match business).

Only if the diversion of demand from the monopolist's book matches is so small that his investment in that business will still yield something more than 5 per cent will exploitation of the repeater match be profitable for him. Unless he can expect a monopoly

19. On the assumption that the demand for a handy and inexpensive lighter that will serve as an advertising medium is relatively inelastic, the introduction of the repeater match might virtually eliminate book matches.

20. If he has no accumulated savings and would have to borrow the $10,000 required for exploiting his repeater match, by foregoing that venture he will have net profits of $1,000. On the other hand, by taking the loan and manufacturing the repeater match his net profits will decline to something less than $1,000 ($500 of monopoly revenue in the repeater match business and reduced profits, or perhaps no return, on his $10,000 equity in the book match business).

return from the repeater match business that more than offsets the loss of monopoly revenue from the book match business, it would be a mistake for him to make the investment.

Cartel arrangements place the associated group in a position comparable to that of the book match manufacturer. They tend, therefore, to restrict investment in facilities for exploiting inventions. Moreover, a cartel exerts a similar influence on investment in plants and equipment for the manufacture of the established product, control of the marketing of which is the original objective of the organization and the primary reason for its existence.

### *Nature of Cartel Restriction of Investment*

In calculating the revenues to be derived from further investment in an industry, a monopolist must consider the fact that earnings from the additional productive facilities may reduce the earning power of pre-existing facilities. He is governed by the economic principle that under monopoly control it is profitable to increase output only as long as additions to revenue from the sale of the larger output (marginal revenue) exceed the additions to cost that its production involves (marginal cost).[21] This principle is particularly applicable to the decisions of businessmen in planning the use of existing facilities over a short term. But just as a monopolist in deciding whether to increase his output from existing facilities must

21. A monopolist maximizes his gains, or minimizes his losses, by so adjusting output that marginal cost (additions to cost by increasing output) equals marginal revenue (additions to revenue by increasing output). As long as selling more will add more to his revenues than to his cost, it pays him to increase output.

This also is true of a seller in a competitive market. But a seller in a competitive market takes price as he finds it—his individual action in expanding output has no appreciable effect on total supply or on the current price. Additions to his revenue from selling more are always equal to the market price multiplied by the increased number of units sold. That is to say, marginal revenue and market price are the same for a seller in a competitive market. This is not true for monopolists. Their marginal revenue is less than market price.

By increasing his output, a monopolist must accept a lower price not only on the additional sales, but also on the sales that might have brought him the higher price had he restricted his output. Hence additional revenues from an increase in sales are not net. From them must be subtracted the revenues foregone by not selling a restricted output at the higher price it would bring.

In technical language, marginal revenue for a monopolist is always less than average revenue (market price). When he adjusts output to bring marginal cost into equality with marginal revenue, his market price will exceed his marginal cost. That is to say, if a monopolist follows the most profitable course he will always restrict output so as to keep marginal cost below market price. Thus the rate of production will be lower than would be socially desirable, because the marginal significance of the product to the consumer exceeds its marginal cost to the monopolist.

take account of prospective additions to both cost and revenue, so in making long-run decisions to expand productive facilities he must consider the effect of additional investment on earnings from existing facilities.

In brief, the Keynesian thesis—that producers will invest, will increase facilities, as long as the "marginal efficiency of capital" exceeds the market rate of interest—does not apply to an economy dominated by monopoly.[22] It applies only to a competitive society. Cartels thwart competition not only in the marketing of products but in the building up of productive capacity. Enterprisers in industries subject to monopoly control ordinarily stop investing before the marginal efficiency of capital, declining as investment expands, falls to the level of the current rate of interest. They do so because it is more profitable. By expanding his own investment a monopolist may undermine his monopoly position almost as effectively as would the appearance of a business rival.

### *Market Strategy a Factor in Monopolists' Investment Decisions*

But not only must a monopolist study the direct effect that expanding his investment will have on his monopoly earnings; he must also consider the indirect effect of making or not making an investment. He must analyze all the business factors that may affect his market position by influencing output, productive capacity, or prices in the industry. The strategic factor—how to hold a "preferred position" in a geographic area, in the market for some particular item in a group of joint or related products, or in some stage of produc-

22. For Keynes' definition of "marginal efficiency of capital," see footnote 9 of this chapter. The Keynesian concept is useful as far as it goes, but it needs to be supplemented if it is to apply beyond a competitive market. Implicitly it assumes that all businessmen, whatever their market position, use the same rate of discount in computing the present value of the prospective yield of a given addition to capital investment. See, for example, Keynes, *op. cit.*, pp. 136-37. It ignores the fact that the rate of discount that a monopolist will use, if he acts rationally, is a higher rate than the one a competitive businessman would use, likewise acting rationally.

The marginal efficiency of capital for a monopolist considering an addition to his investment has to be high enough to include a return on his monopoly position. In effect, his monopoly is (for him) a factor of production on which he requires a return just as the additional capital equipment he is considering installing must yield a net return. From this standpoint, a monopolist has to figure the potential impairment of monopoly revenue from pre-existing production facilities as part of the "cost" incurred by adding to his investment. Expansion by a competitor involves no such cost. The marginal efficiency of capital for a competitor considering an addition to his investment has only to be high enough to offset the cost of acquiring the necessary funds.

tion—often exerts the controlling influence on the actual course and rate of investment.

The decision of Eastman Kodak, for example, whether or not to increase its investment for the production of acetone, acetic anhydride, and photographic chemicals generally, may depend far less on the margin by which the prospective yield on the investment exceeds the market rate of interest than on advantages or disadvantages of other kinds such an investment might bring. Considerations of far more weight to Eastman Kodak would be of the following order: Would the additional investment give Eastman an edge on Agfa Ansco in the manufacturing cost of film? Would more complete integration dissuade potential competitors from invading its special field of photographic equipment and supplies? Or would it, on the contrary, encourage them to invade, perhaps by provoking displaced chemical manufacturers to produce film for sale under house brand names by mail-order distributors and department stores? Might such a program of additional investment irritate du Pont, either because of its indirect threat to du Pont's financial interest in Niacet or because of its direct threat to du Pont's interest in the market for motion picture film? Such concrete, realistic factors as these are certainly in the foreground of any calculation by Eastman Kodak of the advantages and disadvantages of increasing investment in its chemical-manufacturing subsidiary, Tennessee Eastman.

Similarly, if the United Shoe Machinery Corporation were considering a program of expansion—such as buying the Compo Shoe Machinery Company and developing the new Compo process for attaching soles to uppers—its directors, as realists, would surely give more than a little weight to the effect of the prospective growth of the Compo business, under independent management, on the future earning power of United's entire corporate assets, tangible and intangible. They would probably also consider whether buying out and developing the Compo business would tend to forestall the launching of other independent shoe machinery enterprises.

Again, if National Lead contemplated further integration of its business, for example by making ready-to-use paint or complete railway cars, it would probably first consider the reaction of buyers of white lead (and other pigments) or of bearing metals. It would be naive to suppose, with the Keynesians, that the decision would turn

merely on a studious comparison of the market rate of interest with the actual or prospective rate of return on investment in these branches of industry.

The cold fact is that, in an economy shot through with cartels, investments are not made on the basis of a simple calculation of the prospects of obtaining a net yield on the new investment higher than the current rate of interest.[23] In many cases they are in fact made, if made at all, to buttress or extend a strategic market position.

Furthermore, the same factors, working in reverse, condition the investment activities of small-scale and potential enterprises, so far as these impinge on the fields of cartel operations. The promoter of a would-be independent enterprise in any of the numerous branches of industry dominated by cartels has, of course, to keep in mind the terms on which he can obtain funds, the demonstrated or probable earning power of capital in the given field, and ordinary commercial risks. But he would be rash indeed if he failed to take account also, and perhaps above all else, of the hazards certain to attend his invasion of the preserves some cartel group had pre-empted.

### *Cartels and Investment Activity: A Realistic View*

Investment does not take place in an economic vacuum. In the upper strata of industry, investment has become a market weapon. It is a means to business hegemony, an instrument of market control. It is no longer a simple process of converting savings into the tools of production on the basis of a matter-of-fact calculation of costs and prices.

Investment opportunities do depend in part, of course, on technological advances, improvements in the art of management, and trends in population growth. But the Keynesians neglect one of the main forces that actually shape decisions to make capital commitments or to leave funds idle: the desire to establish, maintain, or escape organized market controls. This requires a nice balancing of all the factors bearing on a maximization of profits from past, present, and future investments, and of all the factors that may serve to exclude "outside" capital investment from monopolized preserves.

23. See G. L. S. Shackle, "Interest-Rates and the Pace of Investment," *Economic Journal*, March 1946, pp. 1-17.

Decisions to invest or not to invest often involve choices fraught with great risks. But the risks are not confined to the ordinary commercial risks or the risks inherent in a dynamic economy. For those who already have capital committed in a given field, expansion may bring about impairment of the earning power of previous investments. Moreover, expansion involves strategic risks of loss of power and prestige in the game of business diplomacy.[24] To suppose, as do the Keynesians, that decisions on new investments are the outcome of a simple calculation of cost-plus margins in a free and open market, a comparison of prospective yields and the contractual terms on which funds may be borrowed, is to disregard the outstanding facts of life.

*Earnings Rates and Cartel Investment Restrictions*

In view of the restrictive influence that cartels exert on investments, the high rates of return cartel affiliates frequently enjoy take on new significance. General Electric earned not less than 20 per cent on its average capital investment in its lamp department in every year for which data are available. During 1930 and from 1935 to 1939 its rates of earnings were as follows: 1930, 34.39 per cent; 1935, 23.38 per cent; 1936, 27.00 per cent; 1937, 29.94 per cent; 1938, 20.46 per cent; 1939, 22.83 per cent. Such high rates of earnings unquestionably reflect the power over the market General Electric achieved under the cartel arrangement in which it has participated.[25]

For fifty years before 1939, five-year averages of the Aluminum Company of America's annual rate of earnings on stockholders' equity ranged from 2.82 per cent (during the Great Depression, 1930–1934) to 29.36 per cent (during 1905–1909). From 1935 through 1939 it averaged 16.61 per cent, and over the fifty-year period it averaged 12.03. This continued high rate of earnings reflected Alcoa's power to restrict output and retard investment in the American aluminum industry.

From 1900 to World War II it was apparently about as difficult

24. For an analysis of cartel practices and maneuvers in these terms, see *Cartels in Action, passim,* particularly Chaps. 1, 9, 11. See also Theodore J. Kreps, "Cartels, a Phase of Business Haute Politique," *American Economic Review,* March 1945, Supplement, pp. 297-311.

25. See *Cartels in Action,* Chap. 8.

for competitive capital to obtain a permanent foothold in the manufacture of primary aluminum in the United States as it has been for private capital to obtain a foothold in the aluminum industry of Soviet Russia. That Alcoa obstructed the entry of competing capital is clear. As Alcoa expanded in the first decade of this century, it exacted promises from the sellers of properties it acquired that they would not compete with it directly, or indirectly by assisting others to engage, in aluminum production. In buying electricity under long-term contracts it generally stipulated that the power company would sell no electricity to any other aluminum producer.[26] Alcoa has frequently required its suppliers of materials not to deal with any other aluminum manufacturer.

In 1912 on order of a federal court Alcoa abrogated such restrictive covenants. Its obstructive practices thereafter were less conspicuous. But in the recent antitrust suit against Alcoa the United States Circuit Court of Appeals found that for several years the company had used its dominant position in the market to apply a "price squeeze" on independent sheet-rolling mills, to the prejudice of their competitive opportunities. In the language of the court this was an "unlawful exercise of Alcoa's power." [27] That Alcoa has controlled the expansion of investment and output of aluminum so as to maximize its earnings is reflected in the course of aluminum prices and of Alcoa profits. Alcoa expanded its capacity and released aluminum to the market at rates that would assure it a monopoly revenue.

### *Cartel Restrictions and Capacity Limitation*

The restrictive influence on investment that cartels exert is illustrated by the English steel industry (under control of the British Iron and Steel Federation) after its affiliation with the international steel cartel. In December 1936 the Federation's council adopted a resolution providing "That all proposals in regard to the expansion of plant should be submitted to a committee of the Federation." Although the Federation's power over capacity was advisory only, its influence was so great that in practice it was able to block new construction. In 1936, in the face of intensifying demand for steel,

26. See *U.S.* v. *Aluminum Company of America, et al.*, 148 Fed. *2d* 416 (1945), at pp. 421-29. See also *Cartels in Action*, pp. 224 ff.
27. *U.S.* v. *Aluminum Company of America, et al.*, cited above, at pp. 436-38.

the Federation, because of the opposition of competing steel producers, refused to approve a project for a Bessemer steel plant with an annual capacity of from 350,000 to 400,000 tons and finishing mills of coordinate capacity at Jarrow-on-the-Tyneside. Although the project had been approved by competent engineers and had adequate financial backing, the Federation's opposition led its promoters to abandon it. Of this incident *The Economist* of London said:

> The story of Jarrow throws a particularly vivid light upon the degree to which British industry is already in the strait-jacket. . . . The facts . . . ought to blow sky-high the strange delusions of those who believe in the "self government of industry." The plain fact is that if an industry is elevated to a monopoly . . . it will refuse entry to newcomers . . . It will put its own interests above those . . . of the community as a whole. It will exploit the market for all it is worth . . . It is an ossification of inefficiency, an endowment of selfishness.[28]

Whether or not this incident deserves such vigorous condemnation, clearly the British cartel group used its power in this instance to restrict and retard investment. Nor was it an isolated instance in the history of the international steel cartel. In 1938 Stahlwerke-Verband, representing the German national group in the cartel, tried to block the establishment of a sheet mill in Greece. It persuaded the cartel to request other national groups to refuse to sell semi-finished steel to the promoters of this enterprise.[29] A letter from Stahlwerke-Verband to the cartel in August 1938 reads in part: "As already informed you we have left no stone unturned in order to by all means prevent the establishment of an iron industry in Greece." [30]

The magnesium cartel retarded investment in American facilities for the production and fabrication of magnesium. The record of negotiations between I. G. Farbenindustrie and the Aluminum Company of America during the early thirties reveals IG's conviction that with its production and fabrication patents it could compete successfully with Dow. IG was prepared to establish a magnesium plant jointly with Alcoa. Alcoa, enjoying as it did a contract with

28. "The Lessons of Jarrow," July 18, 1936, p. 105.
29. *Cartels and National Security,* Analytical and Technical Supplement, Report from the Subcommittee on War Mobilization to the Committee on Military Affairs, U.S. Senate, 78th Cong., 2d sess., pursuant to S.Res. 107, Subcommittee Report No. 4, Washington, 1944, Pt. II, p. 69.
30. See *Scientific and Technical Mobilization,* Subcommittee of the Committee on Military Affairs, U.S. Senate, 78th Cong., Hearings pursuant to S. 702 and S.Res. 107, Pt. XVI, Ex. 531, p. 2287.

Dow under which it bought magnesium for less than any of its competitors, dissuaded IG from carrying out its plans. When Alcoa succeeded in bringing Dow into the cartel, IG abandoned its program.[31] Until World War II IG's processes, which Germany utilized to become the world's largest producer of magnesium, were never put to use in the United States, though Alcoa was in a position to license them had it so desired.

### *Indirect Cartel Restrictions on Investment: Output Limitation*

Under an arrangement with Röhm & Haas, operating as a licensee of I. G. Farbenindustrie, du Pont agreed to limit its output of methyl-methacrylate cast sheeting to 50 per cent of that of Röhm & Haas.[32] This agreement remained in effect until a serious shortage of transparent sheeting for bomber noses and other materials developed during World War II. The restriction was waived for the emergency, following a protest from du Pont. In an interoffice memorandum of January 15, 1941, a du Pont official put the matter as follows:

> I was up to see Mr. Haas Monday with respect to the license we hold to operate under his patent for making cast sheeting. You will perhaps recall that we are limited to 50% of his capacity.
>
> I explained to Mr. Haas that we were booked up solid until October of the present year under this restriction and asked him whether he wanted us to tell the Government that we were limited by the license or whether he preferred to lift the restriction. He agreed to lift the restriction during the present emergency.[33]

The restraining influence that powerful corporations with cartel tie-ups exert on investment is illustrated by the experience of the Standard Oil Company of New Jersey after it had developed the process for making synthetic toluol using petroleum as a raw material. When Standard approached du Pont as a possible customer, it found du Pont reluctant to encourage the project because of ar-

31. See Complaint and Consent Decree in *U.S.* v. *Aluminum Company of America, et al.*, Civil Action No. 18-31, in U.S. District Court for the Southern District of New York. Complaint was filed and decree entered on April 15, 1942. For a fuller account of these developments, see *Cartels in Action*, Chap. 7.

32. For text of the 1936 agreement between Röhm & Haas and du Pont, see *Patents*, Committee on Patents, U.S. Senate, 77th Cong., 2d sess., Hearings pursuant to S. 2303 and S. 2491, Pt. II, pp. 819-21. (These hearings will hereinafter be cited Bone, Pt. —, after the committee chairman.)

33. *Ibid.*, p. 838.

rangements it had with the United States Steel Corporation. A Standard interoffice memorandum reported du Pont's position as follows:

> Regarding the Toluol situation in general, Mr. Stewart says that their company [du Pont] is in a rather peculiar position as they have a close working arrangement with the U. S. Steel Corporation which at the present time produces about one-half of the Toluol in the United States. In order to protect this position, while the du Pont Company privately wish to see synthetic Toluol produced, they cannot openly encourage such production as they are fearful of jeopardizing the preferred position that they hold with the steel corporation.[34]

Such efforts to protect markets against new processes or products were not contrary to Standard's own policies and practices. When Standard brought out its new pour-point depressant, Paraflow, it encountered competing products. According to testimony of a Department of Justice representative, Standard thereupon conducted a campaign to eliminate competitors and to obtain market control. By buying out competing manufacturers, by resorting to full-line forcing and tie-in arrangements, by granting preferential discounts and special licenses, it eventually got control of the market.[35] Then it found itself embarrassed by the presence in the market of two pour-point depressants, its own Paraflow and the competitive Santopour, a superior and more economical product, now also under Standard's control. On what to do about it, a Standard official reasoned as follows in an October 1936 interoffice memorandum:

> If Santopour of present quality is continued on the market as a competitor of Paraflow and at the same price, there will be a substantial shift in business from Paraflow to a smaller volume of Santopour due to the greater potency of the latter in many oils. This will result in a very substantial decrease in the total volume of pour depressants sold and a proportionate decrease in gross dollar income. . . .
>
> If Paraflow and Santopour are both to be marketed without loss of total income it is apparent that Santopour would have to be adjusted to the same cost per unit of pour reduction as Paraflow. This could be done by either making a substantial increase in the price of Santopour or diluting it to a considerable extent . . .
>
> We would have to tell a rather embarrassing story to explain the marked

34. *Investigation of the National Defense Program*, Special Committee Investigating the National Defense Program, U.S. Senate, 77th Cong., 1st sess., Hearings pursuant to S.Res. 71, Pt. XI, p. 4649.
35. Bone, Pt. IV, pp. 1759-67.

change in either price or potency of Santopour, and the real reason for the change would be obvious to the trade.

Our conclusion is, therefore, that the best policy is to retire Santopour as quickly and as quietly as possible and to market only Paraflow of present potency.[36]

At times cartels have gone so far in exploiting their monopoly position that they have felt it necessary to revise price policy in order to block new investment. In 1941 the California Alkali Export Association gave the following explanation of a reduction in the price of soda ash in Latin America:

The main factor was the apparent need for some temporary price action in the face of unusual pressure for the erection of local industries, particularly in Mexico, Brazil, and the Argentine, and with special references to caustic soda and soda ash—and where government assistance was being sought. . . . In the Argentine ash prices were also reduced as a temporary measure, first because of interest of government in the entire alkali picture, and second, owing to considerable interest by local groups in such a venture. Ample capital seemed available.[37]

Both the international rubber control program and the International Tea Agreement kept prices high enough to attract new investments, but both cartels took steps to prevent such investments from being made. Article 13 of the rubber agreement of 1934 prohibits the exportation of "any leaves, flowers, seeds, buds, twigs, branches, roots, or any living portion of a rubber plant that may be used to propagate rubber." [38] The International Tea Agreement (1938–1947) provided that "the export from any of the producing countries of seeds, roots, stumps, cuttings, buds, or any living portion of a tea plant which may be used to propagate it, shall be prohibited." [39]

36. Bone, Pt. IV, p. 1824. For Standard's explanation of the Paraflow-Santopour incident, see Bone, Pt. IX, pp. 5204-09. The final upshot of the negotiations was that Monsanto continued to make, and Socony-Vacuum continued to sell, Santopour, but they agreed to reduce its potency to the equivalent of that of Paraflow.

37. *Economic and Political Aspects of International Cartels*, Subcommittee of the Committee on Military Affairs, U.S. Senate, 78th Cong., 2d sess., pursuant to S.Res. 107, Monograph No. 1, pp. 47-48. The arrangement between du Pont and Imperial Chemical Industries (the British chemical trust) under which they jointly exploit the several South American markets, buttressed as it is by numerous cartel agreements involving other leading chemical companies, undoubtedly has retarded new investments in Latin America.

38. *Investigation of the Concentration of Economic Power*, Temporary National Economic Committee, Hearings pursuant to Pub.Res. 113, 75th Cong., Pt. XXV, *Cartels*, p. 13066. (Hereinafter cited: TNEC Hearings, Pt. —.)

39. *International Commodity Control Agreements*, International Labor Office, Montreal, 1943, p. 54. See also V. D. Wickizer, *Tea Under International Control*, Food Research Institute, Stanford University, 1944, pp. 73, 106.

*Implications of Cartel Record on Investment Restriction*

Monopoly earnings and the influence of cartels on the rate of investment acquire a new significance when approached from the standpoint of Keynes' *General Theory of Employment, Interest and Money.* The policies Keynes and his followers advocate to remedy unemployment should be reappraised in the light of the decline of competition. The phenomenon of persistent unemployment, in good times and bad throughout the interval between World Wars I and II, has emphasized the importance of providing continuing investment outlets for savings as a means of insuring full employment. Chronic unemployment at a time when business groups were abandoning competition and resorting to cartel arrangements as a means of enhancing profits was probably more than a coincidence. With the partial data at hand it is impossible to measure in any precise way the influence of cartels on the course of investment. But both economic theory and cartel practice indicate that they have restricted investment in many ways.

In modern corporate enterprise, cartel-shaped policies rather than independent responses to the forces of a free market frequently determine rates of investment and output—and indirectly rates of earnings. Businessmen have sought to evade the principle that the lower the risk, the lower the "earned" or economically justified rate of return. Through collective action, they have sought to reduce business risks and, at the same time, to increase the rate of earnings. Lord Melchett, father of the British chemical trust, well expressed the spirit of business enterprise in a cartel system:

> As there is no monopoly in inventions, nobody can say when the next great idea will come . . . This fact implies that at any moment it might be within the power of any one country to project a new idea which would at once disconcert the whole world balance of industry. This instance gives rise to the natural desire in the interests not only of the leaders of industry themselves, but of the world at large, to cooperate with all those working on similar ideas, so as to pool the results of invention and research and to bring to bear . . . the economic rate of production.[40]

The economic rate of production as conceived by Lord Melchett is not, however, the rate that insures the adoption of new techniques as rapidly as they appear or give reasonable promise of lowering the

40. Sir Alfred Mond, *Industry and Politics,* Macmillan, London, 1928, p. 212.

total unit cost of production in the industry, or industries, in which they are potentially applicable. The rate of production to which the founder of Imperial Chemical Industries refers is not the rate that will equalize the marginal efficiency of capital among different industries and bring it into equilibrium with the market rate of interest. It is not the rate that will insure a flow of investment funds into new enterprises as rapidly as is consistent with social economy. What it is, rather, is the rate that will maximize earnings and protect vested interests.[41]

The new business philosophy leads to investment sluggishness in an age when the continuity of investment on a large scale is essential to a high level of employment and income. If society is to solve the linked problems of unemployment and low standards of living in a private enterprise economy it is imperative not only that new investment opportunities be continually created, but that the channels of investment, in new as well as old fields, be kept open and unblocked. If private enterprise does not use, freely and without hindrance, all the economical investment opportunities that the march of science makes available, the tightening noose on employment and purchasing power will strangle the economy.[42]

Any program of public expenditure designed to solve the problem of full employment and to insure an economical use of resources that ignores the existence and implications of cartel restrictions risks futility. However prompt and freehanded the government may be

41. For a quite different account of the effect of monopolistic practices on the rate of investment, see Schumpeter, *op. cit.*, Chap. 8. Schumpeter argues that monopolistic earnings may provide "the baits that lure capital on to untried trails." He suggests that business would be unwilling to take the great risks involved in trail blazing unless it were temporarily protected by monopoly.

History does not support this thesis. As a general rule monopolistic combinations and cartels have followed, not preceded, periods of extensive capital investment. For example, before the American trust movement from 1897 to 1903, the merger movement of the twenties, and the widespread resort to cartels during the thirties, industrial expansion was rapid and the volume of new capital commitments large. Moreover, the biggest single expansionary influence in twentieth-century industrial development has been the automobile industry and in that field monopoly has been conspicuously absent. For a more detailed criticism of Schumpeter's theories see G. H. Hildebrand, Jr., "Monopolization and the Decline of Investment Opportunity," *American Economic Review*, September 1943, pp. 590-601.

42. Though historical analogies are never exact, instructive is the lesson of another epoch in which stubborn defense of special privileges by vested interests choked an economy straining to give fuller play to its mounting productive potentialities. The origins of the French Revolution were complex, but one of the main causes of that social cataclysm was undoubtedly economic frustration. An abundance of cake cannot make up for a shortage of bread in the diet of any society.

in distributing public funds, no such program can succeed if cartels restrict output and limit capacity. For though aggressive government spending may achieve "full employment," the inflationary forces thus let loose are impotent to overcome, indeed are doomed to aggravate, the maladjustments in the structure of the economy that cartels foster.

*Cartel Investment Restrictions Lead to Economic Distortion*

The fact that cartels have, in certain sectors of the economy, exercised restrictive controls that tend to slow down the rate of investment does not necessarily mean, however, that either a partially or a fully cartelized economy is always and inevitably bound to have unemployment.[43] In the case of a partially cartelized economy, investment opportunities in the noncartelized sectors may conceivably utilize for a considerable period a volume of savings adequate to insure full employment. If these investments absorbed all that part of saved income not used in the limited expansion of cartelized industries, and thus forestalled any reduction of productive activity, the retarded application of new techniques in cartelized fields would, nevertheless, be at the cost of efficiency in the use of resources.

Profits in a partially cartelized economy tend to concentrate in the cartelized areas. In the competitive areas, the marginal efficiency of capital tends to decline and prices tend to fall until they barely cover production costs. In the controlled areas, the marginal efficiency of capital tends always to exceed the current rate of interest.

43. Nor does it mean that economic stagnation always accompanies the formation of cartels in particular branches of industry. In view of the rapid expansion in recent decades of, for example, the electronics, chemical, and air transport industries—all subject to cartel controls—it would certainly be misleading to suggest that cartels are synonymous with sluggish investment activity. Such an inference is not only out of line with the facts, it is a distortion of the argument in the text above.

Scientific advances are largely independent of business arrangements. Even technical experimentation in industry goes on without much regard to cartel tie-ups. At a certain stage the fruitfulness of research in a particular field may be so great that even a pure monopolist would find profitable the industrial application of these research results on a large scale and at a quick pace. But this does not refute the contention that cartels tend to restrict investment in the exploitation of new techniques to a rate below that at which investment would otherwise take place.

Cartels seldom, if ever, directly foster technological research. Even if the business security a cartel provides encourages members to support long-range research—a possible but dubious argument—the industrial application of technical advances is certainly retarded in so far as the cartel's market control strategy is effective. The growth of the electronics, chemical, and air transport industries was in spite of, not because of, cartel controls. Without cartels, their progress, and the increase of investment in these lines, would have been even more rapid.

Profits from the cartelized areas, to the extent that they are withheld from investment therein to prevent spoiling the market, may be invested in the competitive areas, although it is not certain that they will be so used rather than allowed to accumulate in idle balances. Monopolists accustomed to high rates of return are apt to regard as unsound investments in industries in which competition is keen and the rate of return is not only low but falling.

Monopolists are extraordinarily conservative when it comes to taking risks.[44] If the directors or investors in cartelized industries do not promptly reinvest profits, their accumulation in idle bank balances causes a shrinkage in total expenditures, a decrease in national income, and a reduction in employment. If they do reinvest them, to the extent that the funds find an outlet in competitive fields they tend to lower the marginal efficiency of capital. This in turn tends to reduce the incomes of those who make their living or have investments in the competitive areas, and places them at a disadvantage. The terms on which competitively marketed goods exchange for cartel-produced products alter to the detriment of competitive enterprise. Interests producing in the areas of relative overinvestment sell their products in a declining market while they buy much of what they consume in a stable or advancing market. They are obliged to sell cheap and buy dear.

The resulting magnified disparity between rates of return realizable in the cartelized area and in the competitive area further retards investment and discourages enterprise all along the line. For the decline in profits in the relatively capital-glutted fields is a signal for retrenchment, and the increasing variation among rates of profit in different branches of industry warns businessmen of fundamental distortion in the economy—economic disequilibrium. To escape their plight, those producers faced with declining prices and narrowing profit margins may themselves turn to control schemes. When they can do so readily, with a reasonable prospect of mutual agreement on the form and terms of restriction, they may rely on self-help measures; when their number is large, and the scale of opera-

44. Recall that du Pont and Imperial Chemical Industries agreed that they would invest in local manufacturing facilities in Brazil only when the project promised an annual return of 17.5 per cent after all taxes and in Argentina only when the prospective return was 15 per cent. See p. 124.

tions of each producer is small compared with the total, they usually turn to government for assistance.

This method of counteracting the harsh turn of events in the competitive sectors of the economy, far from contributing to economic stability and full employment, only aggravates the difficulties. As the areas of potential investment at attractive rates of return narrow, and inequalities in the distribution of income progressively increase, it becomes more and more difficult to guarantee that savings will flow into investment. Indeed, the occasional spasms of spontaneous investment activity become weaker and weaker. Chronic investment sluggishness can only induce deflation and market stagnation. The result may be a deceptive "equilibrium" in the economy, with widespread unemployment.

### *Defense Against Investment Restriction by Cartels*

Governments could do much to circumvent the tendency of cartelization to cause unemployment. A well-devised plan of taxation and social insurance might transform stagnant monopoly profits into active consumer purchasing power. However, the political and administrative obstacles to such a program are formidable. While it is politically feasible to broaden the coverage and raise the scale of benefits of a social security program, experience does not encourage a sanguine view on the prospects of a sound tax program—one that would absorb the inflated profits in monopolized areas, yet at the same time not disturb confidence, discourage enterprise, and retard investment.

Though a program of public spending may be politically feasible and administratively simple, its sound financing by taxation presents difficulties similar to those encountered in taxing away monopoly profits. Resort to borrowing is easier, but it is less effective in overcoming the economic distortion that cartels induce. By itself a public spending program does nothing to eliminate the restrictive influence of cartels. It only counteracts that influence. So even if full employment were achieved in this way, the community would still be using its resources uneconomically. Too little of the monopolized goods would be produced and too much of the uncontrolled. Public spending in an economy shot through with private monopoly, even though

it encountered no serious political and fiscal obstacles, might alleviate the interrelated problems of full employment and a high level of real income, but it would scarcely solve them.

## CARTELS AND THE BUSINESS CYCLE

Most economists would probably agree that cartels tend to restrict output and, when they have the power, to restrict investments. But a widely accepted argument in support of cartels is that they tend to stabilize business activity and thus to restrain the periodic booms that culminate in overexpansion and depression. Cartel proponents have not fully developed this argument, but they frequently advance it.

The gist of the argument is that cartels tend to discourage price increases during periods of boom and price declines during periods of recession. In brief, cartels impede inflation on the upswing and deflation on the downswing. By doing so, they tend to stabilize economic activity. This argument involves, first, a question of fact, and second, a question of logic.

### *What Cartels Have Done to Stabilize Prices: The Facts*

Business annals afford frequent illustrations of cartel-controlled prices holding firm during depression and occasional illustrations of such prices resisting the general tendency to rise during prosperity. For example, the annual average scheduled price of aluminum ingots in the United States remained unchanged from 1931 through 1933, though the average net price realized by the sole American producer (Alcoa) dropped 3.5 cents a pound, or 15 per cent, during these depression years. But in 1936 through 1939, when general business conditions were improving, aluminum prices advanced only one cent a pound. Moreover, in the next two years in the midst of the boom that the export demands of belligerents and the national defense program generated Alcoa actually reduced its ingot prices, so that after 1941, while the war lasted, the government bought aluminum at 15 cents a pound, or 25 per cent less than the price in 1939. Possibly an urge to counteract the general inflationary trend in prices during this period accounts for the unusual behavior of aluminum prices in the face of a rising demand. Other factors may have played some part in the development, however, such as patriotic

motives, a heavy excess-profits tax, and perhaps a strategy of discouraging potential competitors.

The more firmly a cartel controls supply, the more likely it is to take a long-run view and set a price calculated to maximize earnings through the ups and downs of business. Strong cartels—such as in nickel and molybdenum—can sometimes afford to stick to a price schedule, once established, regardless of changes in business trends.

### *Price Stabilization by Cartels*

The International Nickel Company of Canada dominates the nickel cartel.[45] Normally, International Nickel markets about 90 per cent of the world's output. From 1925 to 1940 the price of nickel in the United States was stabilized at 35 cents a pound. In order to maintain this price, International reduced its output by more than 80 per cent from 1929 to 1932. A sharp reduction in price would certainly have tended to keep nickel buyers from reducing purchases as much as they did and to check the decline of employment and national income. Despite the reduced sales volume that accompanied the stabilized high price, and with business at full ebb, the company in 1932 almost broke even financially. Profits during good years more than counterbalanced, by a wide margin, its small operating loss in the trough of the depression. From 1935 to 1939 International reported an average annual net profit of about $36 million, equivalent to 17 per cent on its net worth.

Molybdenum prices have established an almost equally remarkable record of rigidity. The Climax Molybdenum Company is the sole primary producer of molybdenum in the United States. Its annual capacity has been estimated at 84 per cent of the world's potential output. The cartel agreement between Climax and certain European metal companies handling byproduct molybdenum reserved to Climax all markets in the Western Hemisphere, Japan, China, and Russia.[46] From 1931 to 1940 the price of molybdenum stood unchanged at 95 cents a pound. Although this was barely half its average price of the twenties, it still provided a substantial

45. *Competition and Monopoly in American Industry,* TNEC Monograph No. 21, Washington, 1940, pp. 79-81. See also W. Y. Elliott and others, *International Control of Non-Ferrous Metals,* Macmillan, New York, 1937, Chap. 4; and *Cartels and National Security,* Pt. II, Analytical and Technical Supplement, p. 27.

46. *Competition and Monopoly in American Industry,* pp. 81-82. Financial data on Climax are from Standard & Poor's *Corporation Records,* 1945.

margin of profit. Every dollar of gross revenue from its sales during the period 1934 to 1939 yielded Climax an average net profit of 47.5 cents. This was an average annual return of 93 per cent on its invested capital.

The foregoing examples show what happens when a cartel has almost complete control of the market. Few cartels are so strongly entrenched that they can afford to ignore business fluctuations as completely as have the producers of these metals. In both cases the dominant cartel members own the bulk of the world's known ore deposits from which their respective products are obtained. Barring the discovery of new deposits, they have little to fear in withholding needed supplies from the market.

*Cartels Do Not Always Hold Prices Steady*

Cartels less well entrenched than these—and they are the majority—generally price more flexibly. Although they try to support prices during slack periods, seldom with marked success, they do not usually hesitate to raise prices when business booms and when sales volume promises to hold up or even expand despite the higher price. Ordinarily cartels follow the maxim of making hay while the sun shines. The first rubber cartel restricted exports so severely in the face of steadily improving business conditions that in the first three years of control the annual average New York price more than quadrupled, rising from 17.34 cents a pound to 72.46 cents. At its peak, under cartel regulation of supply, the price reached $1.22 a pound. When the cartel collapsed, partly because of the growth of production outside the control areas—made possible by the uninhibited pursuit of the main chance by the cartel group—rubber prices sank to less than a nickel a pound.

The international steel cartel raised European export prices of steel billets by more than 100 per cent between December 1936 and September 1937, merchant bars by more than 80 per cent, structural shapes by more than 70 per cent, and wire rods by about 33 per cent.[47] All these products held most of the price increases during the sharp recession of 1938.

The Aluminum Company of America raised the average annual price of aluminum ingots by about 30 per cent between 1922 and

47. See *Cartels in Action,* Chap. 5.

1928. But in no depression year of the thirties—indeed, in no year of that decade—was its annual average realized price so low as that of 1922, the year in which the advance of the twenties started.[48]

If cartels have the power, they quite generally retard price declines in periods of recession.[49] Data compiled by the Institut für Konjunkturforschung (Institute for Business Cycle Research) show that during the recession in Germany from 1928 to 1932 cartel-controlled prices fell only 16 per cent, while free-market prices slumped more than 50 per cent.[50]

### *Cartels Reduce Price Swings*

Logically, the case for price stabilization under cartel management is not very strong. Granting that some business leaders attach great importance to stable prices, not all do, and a cartel has to shape its price policies in a way to hold a whole industry in line. If certain members try to discourage price increases when expanding business and mounting demand would permit higher prices, they generally have to face the opposition of other members eager to take full advantage of available profit-making opportunities. Of course, those who favor a price stabilization strategy can argue that to deliberately forego immediate profits would serve the long-run interests of all members. And rational behavior might lead the entire group to act with such restraint.[51] Cartel price policy in some industries may reflect an enlightened regard for long-run interests, but it would be a strange business world in which chances for a modest profit tomorrow generally outweighed chances for a big profit today.

Even if cartels do lessen somewhat the amplitude of price swings,

48. *Ibid.*, Chap. 6.
49. See text, Chap. 4.
50. Institut für Konjunkturforschung, *Wochenbericht*, September 13, 1933, pp. 101-04; November 29, 1933, pp. 147-50; December 6, 1933, pp. 151-55. The Institute's index numbers in 1928, on a 1926 basis, showed an annual average of 102.1 for cartel-controlled prices, and 106.8 for "free" prices. By 1932 the former had fallen to 83.9, and the latter had dropped to 47.5. The kinds of commodities in the two groups, and especially the inclusion of many agricultural commodities in the "free" group, no doubt had a marked influence on the results shown. Nevertheless, the presence or absence of cartel regulation can hardly have been an inconsequential factor.
51. Perhaps an Invisible Hand harnesses the selfish motives of businessmen and leads cartel members to serve the general welfare, as Adam Smith presumed it would guide competitors. Cf. E. G. Nourse, *Price Making in a Democracy*, The Brookings Institution, Washington, 1944, pp. 447-49. Nourse is not concerned with cartels as such, but he does argue that enlightened self-interest may lead those who have the power of market control to adopt a low-price policy.

the oscillations occur on a higher level than would prevail under competition. During depression and in the early stages of business recovery the prices of cartel-controlled products are quite likely to be higher than the prices of noncartelized products expressed as percentages of their respective averages for the upswing and the downswing of the cycle. In depression a reduction of cartel prices to bring them more nearly into line with other prices would probably help to check falling output and employment all along the line. To the extent that the products of the heavy industries—iron and steel, nonferrous metals, machine tools, industrial chemicals, building materials—are under cartel control (and most of them have been to a substantial degree), the influence of their relatively high prices in retarding recovery in its early stages may be great. For business recovery generally depends on an increase of investment. A high price for capital goods, other things being equal, discourages investment and retards recovery. While the demand for capital goods is probably not very elastic at any time, it responds more sensitively to a reduction in prices during this stage of the business cycle than at any other stage.

In the late stages of business expansion (the boom period) the prices of cartel-controlled products may be lower than the prices of noncartelized products expressed as percentages of their respective averages for the upswing and the downswing. If metals and other heavy construction materials are among the cartelized products that are relatively low-priced at the peak of a boom, this fact is likely to encourage investment, create shortages in the capital equipment markets (where output controls are in effect), and encourage advance buying. These developments accentuate the boom, and make the "bust" more precipitous and calamitous.

Available statistical data indicate, and informed students generally agree, that the prices of goods sold by cartels are more rigid when business activity slackens than are the prices of goods sold competitively. As a rule, cartel prices decline less rapidly, and they do not decline so far.[52] Most economists, whether of the neoclassical or the Keynesian school, agree that in the long run flexibility of prices is essential if the gains of technology are to be distributed to

52. Unless the cartel collapses, in which case the fluctuation of prices will of course be much sharper.

the general public.[53] Had a cartel prevented Ford and others from reducing prices as mass-production techniques lowered production costs, fewer people today would own automobiles and millions of workers who gain a living in the industries auxiliary to automobile manufacture would be either unemployed or less economically employed. The national real income would be substantially lower. As Hansen has expressed it: "A structurally flexible price system operates to direct the productive resources into channels which will yield the largest social product." [54]

### *Is Cartel Price Stabilization Worth What It Costs?*

While economists generally agree that flexibility of prices is salutary over the long run, some question the desirability of flexible prices in the short run. They question in particular the advantages of price flexibility during the downswing of the business cycle. They argue that to make all prices as flexible as the most flexible merely accentuates deflation. According to one member of this school of thought: "If prices are flexible, falling prices may lead to falling incomes, which lead in turn to falling demands and a further fall in prices." [55]

Economists holding this view do not ignore what an engineer might call the stresses and strains in the market structure that result from differential flexibilities among the prices of various goods and services. But they take as an effect rather than a cause of business de-

53. See, for example, Hansen, *op. cit.*, Chap. 15.

54. *Ibid.*, p. 314.

55. K. E. Boulding, "In Defense of Monopoly," *Quarterly Journal of Economics*, August 1945, p. 532. See also Abram Bergson, "Price Flexibility and the Level of Income," *Review of Economic Statistics*, February 1945, pp. 2-5; John R. Hicks, *Value and Capital*, Clarendon Press, Oxford, 1939, pp. 265 ff.; and Alfred C. Neal, *Industrial Concentration and Price Inflexibility*, American Council of Public Affairs, Washington, 1942, Chap. 8.

Neal's conclusion was that "general, all-round price flexibility, far from being a stabilizing influence, was likely to exercise a depressing influence upon the level of employment in time of depression." *Ibid.*, p. 166. But his discriminating study also showed that concentration (fewness of sellers) tended to make rigid the margin between price and direct cost per unit. *Ibid.*, p. 165. He argued that this circumstance accentuates depressions, because the maintenance of unit-profit-plus-overhead margins as demand declines tends to increase the discrepancy between savings and investment and thus to depress income.

In determining the degree of price flexibility—or inflexibility—much depends on the nature of the basic data and on the method of their analysis. Unlike most statistical tests of price behavior, that made by Neal was based on census data and involved a rather novel procedure.

pression the increasing skews in the price system—often called price dispersion—attending sharp declines in the relatively flexible sector of the price system while stability prevails in the inflexible sector. As Hansen puts it, "A mere artificial rectification of the price dispersion may get at the root causes of the decline in income and employment no more than a tampering with the thermometer can change the temperature." [56]

Undoubtedly, "artificial rectification of the price dispersion" cannot correct fundamental industrial maladjustments. Nor can it avert a decline in income. But "artificial" manipulation of prices certainly accentuates distortion of the price structure and may accentuate the recession in trade and the decline in income. Tampering with the thermometer to make the mercury rise will have no more effect on the temperature than tampering to prevent its fall. But either kind of tampering may mislead thermometer readers.

When cartels, whether publicly or privately administered, attempt to meet a cyclical decline in effective demand by restricting output and freezing prices they ignore the basic causes of economic maladjustment and trade recession. Such practices cannot prevent or reverse a downward trend of business activity. They may, indeed, increase the disorder of disordered markets and thus delay recovery. The downturn of business activity, whatever its immediate causes, will be reflected not only in price declines but also in investment sluggishness and unemployment.

In order to keep its prices unchanged between 1925 and 1932 the International Nickel Company reduced its output by 80 per cent. This meant a severe contraction of its payroll, and part-time jobs or

56. Hansen, *op. cit.*, p. 318. The quoted statement is unexceptionable from any standpoint, so far as it goes. But many economists would have serious reservations on its implications concerning the "root causes" of trade stagnation. Acceptance of the crucial character of the rate of investment in the maintenance of income and employment, in accordance with Keynesian doctrine, does not require acceptance of the view that the *fundamental* cause of depression is a retardation of investment activity. Flagging investment may be a reliable symptom of trade stagnation and falling income and yet not be the ultimate source of the difficulty.

The Keynesians' emphasis on the role of investment in maintaining prosperity—or generating depression—is logically compatible with an analysis of business fluctuations in terms of real maladjustment, that is to say, in terms of disproportions in the production of goods. The fact that investment hesitancy may be the proximate cause of business depression does not necessarily disprove the classical view that faulty alignment between the general stream of products and the pattern of income expenditure is the ultimately responsible factor.

none for thousands of its employees.[57] It was the same with Climax Molybdenum, and with all cartels that succeeded in freezing their prices during the Great Depression. It is debatable, of course, whether a different price policy would have greatly increased effective demand for those commodities whose prices were frozen by rigorous output restriction.

### *Effectiveness of Price Reductions in Stimulating Business*

Economists have made out a good case for the view shared by most businessmen that, considering each industry by itself, demand is highly inelastic in periods of receding business activity.[58] But they have overstated the case. For here, as always, the whole is greater than the sum of its parts. A decline in the price of a single item of construction material or equipment might be ineffective in stimulating investment. But a general reduction of all controlled prices would be another matter. The maximum flexibility of particular prices—in the sense both of the number of prices that are flexible and of their responsiveness to changing supply and demand condi-

57. These developments tended to be repeated in other enterprises, of course—first in those whose products International Nickel employees customarily bought, then in those that supplied these enterprises with materials, and so on. This cumulative spreading out of unemployment and reduced purchasing power is an illustration of the multiplier principle working in reverse.

58. See, for example, the studies made by Theodore O. Yntema and associates for the United States Steel Corporation "in preparation for hearings on the steel industry before the Temporary National Economic Committee." These studies are reproduced in TNEC Hearings, Pt. XXVI, Exs. 1410-17, 2180, pp. 13893-4128.

Elasticity of demand is a technical concept referring to the responsiveness of buyers to changes in price offers. Whether the demand for a particular commodity is elastic or inelastic (as economists use these terms) depends on whether its elasticity is greater or less than unity. An elasticity of unity means that the amount all buyers will spend for the commodity remains constant regardless of changes in its price. In other words, it means that the proportionate increase or decrease in number of units buyers will take, on a given change in price, is just enough to offset the proportionate decrease or increase in price that the change represents.

Demand for a commodity is elastic if a given decrease in price will so stimulate purchases that buyers together will spend a larger sum for it. Correlatively, an increase in its price will so discourage buying that buyers together will spend a smaller amount for it. Similarly, demand for a commodity is inelastic if a given increase in its price will have so little effect on purchases that buyers as a group spend more for it than they spent at the lower price, while a given reduction in its price will not encourage buying enough to keep total expenditures on this good from declining.

For example, if 1,000 units of a good are salable at $1 per unit and 1,150 units at 90 cents, then the demand for it is elastic: a 10 per cent reduction in price brings a 15 per cent increase in the number sold, or purchased. But if only 1,050 units of this good could be sold on a drop in the price to 90 cents, then the demand for it would be inelastic: a 10 per cent reduction in price would bring only a 5 per cent increase in the number sold, or purchased.

tions—is more conducive to stability of the price level as a whole than a mixture of highly flexible and highly rigid prices.

During depressions it is, indeed, doubtful that a decrease in the price of any particular capital or durable consumers' good would of itself greatly stimulate demand. A price reduction on one or two construction materials would hardly induce a large-scale movement of idle funds into the building industry. But if all construction costs were adjusted downward, corresponding to reductions in total income and purchasing power, it would at least set the stage for a recovery in investment activity. Clearly the main problem in a period of declining business is to turn back the forces making for a decline in the volume of transactions, a shrinkage in physical output, and a contraction of employment. It is certain that this cannot be done by insuring that such business as continues through the lean years will be carried on at prices high enough to preserve customary profit margins.

### *Can the Investment Process Be Regularized?*

More and more economists share the belief that sharp variation in the rate at which investment is made is the mainspring of cyclical movements. Apparently the uncontrolled ebb and flow of investment in an enterprise economy where large sectors are cartelized leads to fluctuations in trade and employment more erratic than are compatible with contemporary demands for economic security. Inventions are cumulative in character but they make their appearance at an uneven rate.[59] An important product of technological advance like the automobile may bring with it a host of complementary demands—for roads, filling stations, tourist camps, and the like—that create a tremendous general expansion. When this movement is exhausted no benign providence guarantees that a new invention will be immediately forthcoming to provide a comparable new stimulus to investment and economic expansion. In the absence of such a galvanizing force, a recession in business activity is likely to ensue. Then only two basic ways to halt it are available: (1) to find new investment outlets, (2) to stimulate consumption.

59. For the pioneer study and an outstanding work on the relation of technological advance to the expansion and contraction of business activity, see J. A. Schumpeter, *The Theory of Economic Development,* Harvard University Press, Cambridge, 1934. This is a translation of the original German version, first published in Berlin in 1910.

Economists who insist that a mere lowering of prices will of itself be unlikely to counteract the forces making for contraction of investment may be correct. But once a recession is under way, uncontrolled prices will already have fallen. To prevent other prices from falling by resort to cartelization will increase the distortion of the terms of trade between the cartelized and the noncartelized sectors of the economy for such trade as is being carried on.

*Relation of Cartel Price Policies to Business Recovery*

The issue is not primarily between rigid and flexible prices.[60] It is between competitive and noncompetitive prices. The purpose of cartel control is to assure a more profitable relationship between costs and prices than would prevail under competition. A seller in a competitive market will continue to expand his output as long as what he can get for the increased output is greater than the additional costs it occasions. This is his most profitable course of action. A cartel, by reason of its control of supplies entering the market, can influence price, if not indeed determine it. Reduction of output pays the cartel. Its prices always tend to exceed marginal costs. In a noncartelized market, on the other hand, the price always tends to equal marginal costs: no seller can afford to accept less or, under competition, can get more.

The question of how the cartel policy of keeping prices above marginal costs influences general business during a recession can be simplified by distinguishing between consumer goods and producer goods.

If a cartel reduces the price of a consumer good and the demand for it is inelastic, consumers will buy more of it but not enough more to compensate the cartel members for the lower unit price. The result of the price reduction will be to decrease total consumer expenditures for the product. As consumers get this product for less money, both per unit and in the aggregate, they have more to spend

60. In part, it is this: Declining prices during business recession generate uncertainty. They encourage businessmen to reduce inventories and buy on a hand-to-mouth basis. The relatively few business firms contemplating plant expansion or improvements and the promoters waiting for a favorable moment to launch new enterprises delay until they believe prices have reached bottom. But it cannot be persuasively argued that the failure of some prices to decline while others are rapidly declining creates greater confidence in the stability of business than would a fairly even downward movement of all or most prices. Businessmen are more likely to invest when they think prices are in line than when they think they are out of step.

on other goods. The larger expenditures for other goods tend to increase the output of such goods. Thus a reduction in the price of a cartel-controlled consumer good that brings its price nearer to its marginal cost will increase real income. Moreover, such a price reduction may retard the decline in employment both in the industry of the price-reduced good and in consumer goods industries generally.[61]

If the demand for the price-controlled product responds sensitively to price changes, a cartel decision to forego monopoly profits during depression and reduce the price will check the decline in sales volume and in consumers' expenditures. This will tend to sustain employment and payrolls in the industry of the price-reduced good, and enlarge the community's real income.[62]

*The Case of Producer Goods*

As indicated, many economists believe that demands for producer goods tend to become extremely inelastic during a business recession. In a depression total effective demand declines and the opportunities for profitable investment decrease. As the general investment outlook is unfavorable, a decline in the price of a cartel-controlled equipment item, bringing it down to its marginal cost, might increase purchases so slightly that aggregate expenditures for it would actually decline.[63]

61. This would not necessarily follow if the reduction in cartel prices to the level of marginal costs were accompanied by a reduction in wages. But as an increase in output would require the services of more laborers, it should tend to increase both wage rates and payrolls.

This discussion focuses primarily on pricing policy. Wage policy is another matter. The position taken here does not rule out the possibility of wage flexibility contributing to economic stability, in accordance with orthodox theory. Nor does it adopt the unorthodox view that wage rate changes are an unsettling factor. Cf. Lange, *op. cit.*, Chap. 10. See especially p. 63: "Flexibility of factor prices makes the economy move farther and farther away from equilibrium." This view appears to overlook the possibility that wage reductions in a declining market might help to sustain employment, for example by providing an incentive to production for inventory in anticipation of higher costs later.

62. Consumers' real income will increase immediately because their additional purchases of the price-reduced commodity more than offset any reduction in expenditures on other commodities that may result from an increase in expenditures for the price-reduced commodity. While total expenditures on consumption goods might not be immediately changed, a larger part of the total would go to wage earners and a correspondingly smaller part to persons who receive other types of income, notably income from property. This development tends to increase the community's propensity to consume and thereby to stimulate consumer goods industries generally. Thus the price reduction tends to increase real income and employment. In brief, it tends to alleviate the depression.

63. Some economists think that this might lead to a decline in the community's

Even if this occurred, the primary and immediate effect of the price reduction would be to retard the fall of real income. The significant factors conditioning the volume of real income, so far as it depends on the operations of capital goods industries, are (1) volume of investment in terms of men employed and raw materials used and (2) the proportions in which income from the sale of capital goods is distributed. In so far as the price reduction brings an increase or checks the decline in the number of units of the price-reduced capital good sold, it will stimulate the demand for labor and raw materials despite a decline in total outlay for plant and equipment. Even for a capital good with a relatively inelastic demand, therefore, a lower price may tend to reduce unemployment.

An increase in the demand for labor tends to increase its price, or at any rate to counteract tendencies toward wage cuts. But even should wage rates continue to fall (though presumably declining less precipitately), the increase in the volume of employment would tend to retard the fall in aggregate wages. To the extent that the price reduction may have decreased aggregate proceeds from the sale of the capital good in question, the increase in wage income has been at the expense of income that would have accrued to capital. As ownership incomes are less likely to be spent during depression than labor incomes, the high probability is that the alteration in income distribution would lead to greater aggregate consumer expenditures than would have occurred in the absence of the capital

real income, because savings must adjust themselves to the smaller aggregate expenditures in investment goods at the lower prices. (Bergson, *op. cit.*) It is of course impossible to prove that this contingency could not occur. It seems highly probable, however, that the decrease in the prices of investment goods would result in such a change in the distribution of income as to increase the community's "propensity to consume." This is the term Keynes used to describe the disposition of an individual or a community to spend income on consumption goods. The converse term "propensity to save" means the community's or the individual's disposition to save income.

The size and distribution of the community's income will affect its propensity to consume. Their needs dispose those who make little to spend most or all they make on consumption goods. They save little or nothing. Those who earn a lot are disposed to save a large part of what they make.

Cartel members by getting monopoly profits at the expense of their customers may increase the community's propensity to save. At the same time cartels tend to obstruct investment. By interfering with the community's "propensity to invest"—to coin a phrase—while fostering its propensity to save, cartels hinder full employment and the growth of national income. Stabilizing prices when business activity declines preserves profits at the expense directly of labor and indirectly of consumers, and this is conducive to a decline in the community's income. A decline in business activity narrows investment opportunities, and the preservation of profits which do not find investment outlets will tend to reduce employment and national income.

goods price reduction. Diverting income from ownership to labor in this way should, therefore, check the reduction in employment and counteract depression. Cartel influences, however, prevent such an outcome.

If, contrary to the opinion of most economists based on the response to sporadic reductions in the prices of specific equipment items or in separate product lines, the demand for the whole class of capital goods should prove to be elastic even during depression—in the sense that if all capital goods prices declined together total expenditures for the group would increase—the salutary effect of price reduction is clear. It would reverse the tendency to hoard savings, would increase employment, and through the multiplier principle would expand the volume of trade generally.

Even if a reduction in controlled prices should exert an insignificant influence directly on investment and indirectly on consumption, such a reduction by bringing prices nearer to marginal costs, both in the producer goods and in the consumer goods sectors of the economy, would tend to stimulate consumption directly.[64] For with cartel prices above marginal costs, aggregate income tends to be distributed in a way that stimulates the propensity to save. But a relative increase in savings at a time when investment opportunities are drying up is especially pernicious, tending to reduce aggregate expenditures. Those corporations able to meet only out-of-pocket expenses will be unable to save. Those that still get a return on invested capital may contrive to save directly, or if they distribute their earnings the owners may very well keep on saving a set part of their incomes from habit. In either event, the funds are unlikely to be invested. Most companies are burdened with excess plant capacity during a depression. In short, preventing price declines by a resort to cartel controls strongly tends to bring about maldistribution of income.

It is by no means certain that such a redistribution of income as might be contrived by a removal of cartel price controls in time of depression would, by itself, stimulate consumption enough to halt the downward trend of prices. But, to put the shoe on the other foot, it is even less probable that an attempt to keep all prices fixed by

64. For a definition of marginal cost, see footnote 21 of this chapter.

reduction of output would halt deflation. Much experience shows that curtailment of production does not stop deflation. In fact, it intensifies it.

*Cartels and the Control of Business Cycles*

Discretionary control of specific prices is in general an unpromising approach to the problem of industrial stability. Granting that public economic policy should have as primary objectives economical use of resources, abundance of employment opportunities, and steady improvement in living standards, the achievement of these goals will require considerable flexibility of prices. Flexibility in the pricing of specific commodities and continual adjustment of price relationships so as to reflect changing conditions of supply and demand for particular goods are entirely compatible with efforts to maintain a stable general price level. Indeed, the studies incorporated in this work point strongly to the conclusion that flexible pricing of specific goods will promote stability in the price system. By appropriate monetary and fiscal policies society may be able to prevent violent fluctuations in the general price level and thereby promote greater steadiness in investment, trade, and employment. But a stable price level would not guarantee economical use of resources and high-level income and employment. Cartels might still keep prices above marginal costs and check the flow of resources from areas of surplus capacity to areas of relative scarcity.

Poverty in the midst of potential plenty can be overcome by abolishing either plenty or poverty, but the two courses are not equally sound. Governmental intervention to stabilize the economy should be directed toward increasing effective demand, not toward restricting output. If governments are to make their fiscal and monetary policies count for the most in increasing effective demand, they must at the same time try to prevent price rigidities resulting from cartel activities. The policy of using the sovereign taxing and borrowing power to increase total purchasing power and promote employment in times of business recession requires, to make it effective, that the dollars thus made available for spending shall go as far as possible in putting people to work, increasing output, and raising living standards. To meet this condition it is imperative to eliminate

cartel restrictions that tend to keep cost-price relationships (profit margins) out of line with those in competitive fields.[65]

Distortion of cost-price relationships in an economic system fosters investment sluggishness, business stagnation, and chronic unemployment. When national income is expanding, these tendencies may be temporarily obscured. At such times, the constrictive influence of cartels on the volume of production and the amount of employment is difficult to segregate from the numerous stimulating influences that in combination more than offset it. But when national income is declining, the stifling effect of cartel restrictions stands out in bold relief. For these restrictions obviously strengthen the forces pushing toward retrenchment and aggravate the imbalance in the economic system. If government pumps purchasing power into the channels of trade in an effort to relieve widespread distress and to counteract the downward spiral of deflation, cartels cannot fail to handicap the recovery program and may completely nullify it.

65. Labor monopolies may introduce similar disparities in cost-price relationships. But an analysis of the causes and effects of the restrictive policies of trade unions is beyond the scope of the present study.

## Chapter 8

# ALTERNATIVE CARTEL POLICIES

CARTELS ARE a form of economic collectivism—both a repudiation of competitive markets and a resort to industrial self-government. They are sometimes a repudiation of free private enterprise also, as when they bring in governments to support them.

In the United States little is heard from the few proponents of an outright policy of laissez faire toward cartels. More numerous and articulate are those who urge that American business should be freed from antitrust restrictions affecting foreign commerce. Many businessmen, and some students with a more objective attitude toward the cartel problem, contend that American firms operating in foreign markets are at a disadvantage if they cannot play the game as others play it. They point out that American hostility toward cartels, though perhaps not unique, is internationally a minority attitude, and that the United States is rapidly becoming an island of free enterprise in a sea of collectivism. As one writer has said, "We are likely to find free competition in many fields as obsolete after the war as a Model T Ford." [1] Cartel defenders contend that to be realistic the United States must accept cartels and adjust its policies to permit American firms to take part freely in them.

### *The Dilemma of Some American Firms*

Supporters of this view assert that, as a practical matter, in certain industries in certain jurisdictions, American-owned firms have only two choices: either to take part in cartels or to withdraw from business. The petroleum business in South America illustrates the point. In Argentina the oil industry operates under a compulsory cartel

1. Milo Perkins, "Cartels: What Shall We Do About Them?," *Harper's Magazine*, October 1944, p. 578. See also *Memorandum on Regulatory Measures Affecting American Foreign Trade*, National Foreign Trade Council, New York, September 1944, especially Section B, "The Systems in Foreign Nations Differ Greatly From Our Own," pp. 111-26.

arrangement dominated by Yacimientos Petroliferos Fiscales (YPF). A branch of the Argentine Government, YPF produces, refines, and markets petroleum and its products. To protect its own fiscal interests the government has rigidly restricted the established private concerns to definite quotas in the market and closed the industry to outsiders. YPF has first claim on expanding business. Through YPF the government fixes prices and determines quality. Foreign oil companies that invested in the Argentine before the founding of YPF must do business according to the official rules or withdraw from the market.[2]

In Chile a voluntary cartel among the importers regulates the marketing of petroleum products, but the Chilean Government has countersigned the cartel agreement. The cartel guarantees a private Chilean marketing company one third of the market. To make this guarantee effective each of the other distributors must accept a restriction on its volume of business as the price of retaining any place whatever in the Chilean market. A more or less similar cartel pattern covers the petroleum industry in other South American countries. Nor are such arrangements confined to the petroleum industry. The Chilean law of 1934 gave the Chilean Nitrate & Iodine Sales Corporation an export monopoly for these products. The law also provided for distribution of quotas among all producers.[3] The two large enterprises financed chiefly by American interests must stay within their assigned quotas or get out of the industry.

Even where they are not coerced into doing so, American firms may find it expedient to join cartels. In Europe cartels regulated most lines of manufacture and wholesale distribution before the war. American firms with subsidiaries in European countries generally found it advantageous to conform to local practices. Though under English law firms that refuse to conform to cartel regulations are not subject to legal penalties, two American subsidiaries took part with eleven English concerns in a cartel regulating the distribution of tires and other rubber products. The cartel set prices for the entire industry. Apparently the American firms took part in this venture voluntarily, and no doubt profitably.

2. See D. M. Phelps, "Petroleum Regulation in Temperate South America," *American Economic Review,* March 1939, pp. 48-57.
3. See *Cartels in Action,* pp. 140-41.

If the Americans had not taken part in this British cartel, they probably would have encountered its hostility. The cartel might have mobilized its collective strength to harass the independents, and as foreign enterprises they might have been vulnerable to appeals to local pride and prejudice. In a market as large and cosmopolitan as the British, however, well-established, financially strong branches of American rubber companies could no doubt have given a good account of themselves. Competition would probably have brought lower prices and profits. If in the drive for sales volume, capacity had so expanded that prices did not cover total unit costs, some producers might have faced the necessity of recapitalization, technological renovation, or even withdrawal from the industry. But the function of competition is to force such readjustments, to bring about a better balance between demand and supply, between cost and price.

### *Desire of Exporters for Greater Freedom to Collaborate*

To insure Americans firms the right to take part in cartel arrangements in the domestic markets of foreign countries requires no new legislation or modification of antitrust statutes. So long as cartels confine their operations to foreign markets, so long as they do not touch the foreign commerce of the United States, Congress has no power over them and they are not subject to the Sherman Act. American firms have always been, and are now, free to take part in them, and they commonly do so.

What some American businessmen appear to want is freedom to enter cartels of broader scope, which may restrain United States trade, either domestic or foreign. The National Foreign Trade Council apparently seeks both greater freedom for American exporters to join international cartels and greater certainty about the limitations that antitrust statutes impose. The Council recommends:

> That Congress, in order to give Americans equal opportunity with foreign competitors, specifically recognize that Americans may enter into international business agreements valid under the foreign laws provided they result in no *unreasonable* restraint of trade within the United States; and that action so permitted shall not be held to be in restraint of foreign trade of a domestic competitor.[4]

4. "Resolution on International Business Agreements" adopted by the Board of Directors, National Foreign Trade Council, New York, January 26, 1945. Italics supplied.

The Council further proposes:

> That Congress specify the standards and objectives of our foreign economic policy to be considered in determining the reasonableness of possible restraints of trade in international business agreements. The standards should include for example the interests of national security, conformity with the public international engagements of the United States and respect for the policy and laws of other nations.

### *Collaboration Under the Webb-Pomerene Act*

In the Webb-Pomerene Act of 1918 Congress granted American firms engaged in export a limited exemption from the prohibitions of the Sherman Act. It authorized them to act in concert, or even jointly, in selling abroad, provided they do not thereby restrain trade within the United States or restrain the export trade of any domestic competitor or do anything that "artificially or intentionally enhances or depresses prices within the United States." [5]

In brief, the Webb-Pomerene law simply permitted American exporters to restrict, or even eliminate, competition *among themselves* in foreign business. That was the privilege Congress granted—and nothing more. It did not authorize them to limit competition collectively between American exporters and foreign sellers (through cartel agreements), and it explicitly forbade (1) interference with the export trade of nonassociated American exporters (exclusive restraint of trade), and (2) stifling of trade rivalry in the domestic market among the cooperating exporters (mutual restraint of domestic trade).

Between 1918 and 1940 a total of 120 export associations with more than 2,000 member firms filed registration statements with the Federal Trade Commission. However, before the end of this period many of them had quit. In February 1940 only 44 associations, representing 434 member firms, were active.[6] The scope of the activities of these associations has varied. Not much is known about most of them, but some have acted as joint sales agencies in behalf of their members, soliciting orders abroad, supervising shipments, and col-

5. Export Trade Act, 40 Stat.L. 516. In 1924 the Federal Trade Commission ruled that export associations might exist for no other purpose than to fix prices and allot quotas. The Commission declared that "it is well understood that an incidental or inconsequential effect upon domestic prices is not unlawful." *Export Prices and Export Cartels*, TNEC Monograph No. 6, Washington, 1940, pp. 125-28.

6. *Export Prices and Export Cartels*, pp. 135, 154.

lecting bills. Many, however, serve only as a medium for fixing prices or dividing foreign sales territories. The recent antitrust suit against the United States Alkali Export Association, Inc. (Alkasso) and the Federal Trade Commission proceedings against Pacific Forest Industries suggest that some of these groups find it difficult to reconcile business opportunities with legal limitations.[7] If Congress gave Webb-Pomerene associations freedom to impose restraints that are now forbidden, experience indicates they would exercise it.

*Effect of Export Associations on the American Market*

According to the government's complaint and appended exhibits in the Alkasso case, Alkasso took part in a world alkali cartel. This cartel allegedly reserved the North American market to Alkasso, the European market to Solvay et Cie., and the British Empire, except Canada, to Imperial Chemical Industries, Ltd. (ICI), while to ICI and Alkasso went agreed shares of the markets in China, Japan, and South America. Each party assumed responsibility, the government charges, for preventing shipments into the others' exclusive markets and for keeping total exports from its exclusive territory within its assigned quota.[8]

Whether or not the courts take the same view as the Department of Justice, it is fairly clear that producers who have learned to co-operate in regulating their foreign sales, and have found means of making their joint program effective, are not likely to forget what they have learned, when doing business in the home market. This is especially true when, as in this instance, only a few companies sell in the domestic market.

7. *U.S.* v. *United States Alkali Export Association, Inc.*, Complaint filed March 16, 1944 in U.S. District Court for the Southern District of New York. See in particular Part V of the Complaint. In the spring of 1947 this case was still pending.

Pacific Forest Industries was a Webb-Pomerene association whose members were the principal producers of Douglas fir plywood. After a summons and formal hearings (September 12, 1939) the Federal Trade Commission found that some activities of this association went beyond its authorized powers and the Commission issued (January 27, 1940) certain "Recommendations." In particular, the Commission forbade the association to prohibit its members from selling plywood to nonmember American export firms. It also directed the association to discontinue advertising itself abroad as the sole authorized export representative of plywood mills in the Pacific Northwest. See *Export Prices and Export Cartels*, pp. 129-31.

8. See *U.S.* v. *United States Alkali Export Association, Inc.*, cited above, especially paragraph 41. The Department of Justice asserts that this cartel restricted imports into the United States, interfered with the export trade of American firms that were not members of the association, and stifled competition among association members in the domestic market. For further details on the alkali cartel, see *Cartels in Action*, Chap. 10.

The history of the Sulphur Export Corporation may be cited as another case in point. Before its organization in 1922, three companies accounted for the entire American output—Texas Gulf Sulphur, Freeport Texas, and Union Sulphur.[9] These three producers had been competing actively since World War I, and sulphur prices had moved steadily downward from $22 a ton during the war to a low of $12.50 a ton by 1922.[10] The Sulphur Export Corporation, a Webb-Pomerene association, made a price-fixing agreement with the Sicilian producers in 1923[11] and the American price of sulphur promptly began to rise. It was $16 a ton in 1924, and reached $18 a ton in 1926.

Sulphur prices behaved very differently during the Great Depression, when the Sulphur Export Corporation was active, from the way they behaved during the brief depression of 1921 under competition. During 1921 and 1922, prices fell rapidly until organization of the export association. Between 1926 and 1938 domestic prices remained unchanged at $18 a ton.[12]

Such price behavior suggests the influence of the Sulphur Export Corporation on the domestic market. Texas Gulf and Freeport, having disciplined themselves in collaboration abroad, apparently

9. The Union Sulphur Company, which enjoyed a monopoly of American production until 1915, had made a cartel agreement with the selling agency (Consorzio) for the Sicilian producers as early as 1908. During World War I Freeport Texas and Texas Gulf Sulphur began production, both utilizing the Frasch process on which patents had expired. Freeport Texas is a holding company, of which Freeport Sulphur is an operating subsidiary. See T. L. Morrison, "The Economics of the Sulphur Industry," unpublished doctoral dissertation, University of Texas, 1938, especially Chap. 4.

10. *Investigation of the Concentration of Economic Power,* Temporary National Economic Committee, Hearings pursuant to Pub.Res. 113, 75th Cong., Pt. V, *Monopolistic Practices in Industries,* Washington, 1939, p. 1991. (Hereinafter cited: TNEC Hearings, Pt. —.)

11. *Ibid.,* Ex. 381-A, pp. 2214-17. The agreement was dated March 14, 1923, but its effective date was October 4, 1922. The agreement provided that "the prices, terms, and conditions of sale of all sulphur . . . shall be fixed from time to time by the parties in such manner as best to serve their mutual interest."

The 1923 agreement expired in 1932, but was renewed in 1934. (*Ibid.,* Ex. 381, pp. 2208-12.) During the interim, effective competition did not develop in the industry.

12. See *ibid.,* p. 1997; cf. *ibid.,* p. 2203, and *Competition and Monopoly in American Industry,* TNEC Monograph No. 21, Washington, 1940, pp. 108-10. This apparently was the price that maximized profits for the American sulphur companies. With Spanish pyrite at 13 cents a unit (22.4 pounds of sulphuric pyrite) c.i.f. Atlantic ports, it has an advantage in the manufacture of sulphuric acid over domestic sulphur at $18 a ton at Gulf ports. But as the raw materials move from the Atlantic Coast inward, sulphur gains an advantage, because the freight charge per unit of sulphur is much less for the pure product than for pyrite. To have reduced the price of sulphur to capture the Atlantic Coast market would apparently have cost more than it was worth.

behaved similarly in the domestic market. Once they had joined hands to exploit foreign markets, effective price competition at home disappeared.[13] Common sense, logic, and experience suggest that removal of all restrictions on collaboration among American business firms in foreign markets would reduce competition in domestic markets.

*Private Cartels May Defeat National Policies*

A laissez-faire attitude toward cartels would tend to defeat domestic antitrust policy, and would probably lead to equally serious consequences of other kinds. Canadian experience shows that private cartels can defeat national commercial and industrial policy. In 1932, pursuant to the Ottawa Accord on a preferential tariff policy, the Canadian Government put plate glass from British Empire sources on the free list. The government was trying to stimulate the use of Empire materials by Canadian manufacturers who were selling their finished products in Empire markets. Its particular object in this case was to encourage use of English plate glass in the laminated-glass windshields made in Canada for sale to Canadian automobile manufacturers. But this program apparently conflicted with arrangements foreign plate glass manufacturers had privately made. A representative of a Canadian automobile manufacturer testified before the Dominion Tariff Board in an investigation in 1936:

> We endeavored to buy 100 per cent of our glass from Mr. Phillips' company [the windshield manufacturer] made of empire glass. When we first sent the inquiry out it brought back the comment that our glass would cost us more money. We signified a willingness to entertain an increase in price to help our content picture, particularly in view of our export requirements, which amount to one-third of our total business. Finally we were told we could not get more than, I believe, 22 per cent of our glass requirements from England.[14]

13. After the war, Union Sulphur's output steadily declined as its sulphur holdings neared exhaustion. It abandoned production in 1924 and quit operations in 1928 when it had disposed of its inventories. Texas Gulf and Freeport Sulphur took over Union's stock in the Export Corporation. They have continued to produce over 94 per cent of the domestic output. TNEC Hearings, Pt. V, p. 1992.

Economists who believe that when only two or three suppliers sell in a market these firms need not collaborate in order to establish the most profitable price policy should study the record of this industry. They will find it instructive. The third study in this survey will include a detailed analysis of such situations.

14. *Canada and International Cartels,* Report of the Commissioner, Combines Investigation Act, Department of Justice, Ottawa, October 10, 1945, p. 9. The Vice-

Apparently the plate glass cartel in effect nullified an act of the Canadian Parliament.

Since Imperial Chemical Industries, Ltd., consolidated the British chemical industry in 1926 it has collaborated with du Pont in regulating world markets for chemicals.[15] The 1929 Patents and Processes Agreement gave ICI exclusive rights for Empire markets, except in Canada, and du Pont a preferred position in North America, with the same exception. In Canada, du Pont and ICI do business through a joint subsidiary, Canadian Industries, Ltd. (CIL). While under this arrangement CIL has become an important producer of chemicals, the policy of its parent companies has been to restrict its local manufacturing operations, to safeguard their Canadian import interests. The minutes of a meeting of the representatives of the three companies in Montreal in 1930 state:

> It is very undesirable that CIL should provide manufacturing capacity in Canada if, from a family viewpoint, Canadian requirements can be more profitably supplied by the existing capacity owned by one of the majority's stockholders.[16]

The parent companies have also restricted CIL's export business. According to the Canadian Combines Investigation Commissioner, "Because of the restrictions on its operations CIL was unable to co-operate in the efforts made by the Canadian Government to expand trade with the West Indies . . ." [17] Minutes of a meeting of representatives of ICI and CIL in Montreal on September 16, 1932 reveal the embarrassment the arrangement caused an official of CIL, and the manner in which he avoided compliance with the Canadian Government's policy:

> CIL, in company with other Canadian firms, were subject to considerable pressure by their Government to develop Canadian export trade with the West Indies especially because the Canadian Government was spending important sums in subsidizing steamship facilities with the West Indies. He

Chairman of the Tariff Board then called as a witness Mr. Harrison, the Canadian representative of the English plate glass manufacturer, and asked him: "You are only one concern in the British Empire and you are linked up with the world cartel—let us call it by its right name. Isn't that exactly what the situation is?" The witness replied: "There is no doubt there is an agreement." *Ibid.*

15. See *Cartels in Action,* Chapter 10, for a detailed discussion of these arrangements.

16. *Canada and International Cartels,* p. 20.

17. *Ibid.*

felt that the CIL position with its Government would be strengthened if free to quote on certain products—*where necessary protecting ICI prices*—as refusal to quote had led to complaints to the Government on occasion in the past.[18]

Again, the 1938 international nitrogen cartel bound its members not to ship nitrogen into designated markets in excess of allotted quotas regardless of the tariff policies of the countries concerned. In short, although the nitrogen agreement was a private treaty among rival business groups, the cartel did not hesitate to nullify national action designed to increase a country's imports.

### *Laissez Faire Fosters a Positive Cartel Program*

Despite the advantages to American business firms of greater freedom to participate in international cartels, it is improbable that the United States will accept laissez faire as a national policy. Other countries are less likely to accept it than this country is. Unless governments cooperate to curb or regulate cartels, they will probably act separately to encourage them. Experience shows that in countries with an institutional background friendly to cartels genuine laissez faire seldom endures. It soon gives way to a positive program of protecting and promoting cartels. Government in effect becomes a silent partner of private business and underwrites its cartel activities.

Businessmen bent on collective control of markets are usually not content with mere freedom to act in concert. In bargaining with similar business groups abroad, they frequently turn to their governments for support and generally receive it. Although cartels presumably work to advance the collective interests of those who take part in them, each member has an individual interest that conflicts with that of every other member. Each strives for as large a quota as possible for himself—and minimum quotas for the others. Similarly, each national group competes with its counterparts abroad for as large a share of world markets as possible. The group interest tends to become identified with the national interest. Its defense becomes a matter of national prestige and enlists patriotic sentiments.

A cartel is an agency for regulating international trade. Cartel regulations affect both the volume of world exports and their divi-

18. *Ibid.*, p. 21. Italics supplied.

sion among the participating national groups. They also affect the terms of exchange, the international balance of payments. Every country has a vital interest, therefore, in seeing that its various industrial groups do not come off second best in cartel bargains.

British participation in the international steel cartel illustrates how a confederated national group of producers may easily lead a nominally laissez-faire government into playing an active role of safeguarding and advancing the industry's interest. In 1935, after it had organized the domestic iron and steel market, the British Iron and Steel Federation began negotiations for affiliation with the international steel cartel. An acute conflict of national interests immediately developed. In a dispute over the British import tonnage to be allotted to continental steel producers, the Federation appealed to the British Government for assistance. The government responded. At the request of the Federation, and on recommendation of the Import Duties Advisory Committee, Parliament raised import duties on steel to 50 per cent ad valorem.

This almost prohibitive tariff barrier brought the continental producers to terms. Deciding that half a loaf was better than none, they accepted import quotas satisfactory to the British industry.[19] Parliament thereupon reduced to 20 per cent the customs duty on steel imports within the assigned cartel quotas. It subjected imports above the agreed quotas to a penalty of 13 1/3 per cent.[20] After ratifying the agreement the Federation had worked out with the cartel, Parliament then made the Federation in effect a quasi-administrative agency of the state, granting it discretionary power to increase the volume of imports permissible at the preferred rate.

### *Governments Back Their National Producers*

The British Federation's tactics in bargaining with the cartel were neither novel nor unique. European governments in the interval between World Wars I and II persistently supported their businessmen in cartel negotiations, frequently using the tariff as a weapon. Sir Alfred Mond, organizer of ICI and leading British cartel proponent, has described its use as follows:

19. For the first year of the agreement these totalled 670,000 tons and thereafter 525,000 tons. This compares with annual British imports ranging from 881,000 to 4,406,000 tons during the decade 1921–1930. See *Cartels in Action*, pp. 194-97.

20. That is, to a payment of a standard duty of 33 1/3 per cent ad valorem.

. . . in negotiation, the man behind the tariff wall always has something with which to bargain, which the man in the Free Trade country has not. Any one who has any practical experience of bargaining with continental producers knows that the first thing they say is, "You cannot export to our country, because we have a tariff. How much of your market are you going to give us?" [21]

Conflict of national interests in cartel negotiations is likely, therefore, to turn a government's laissez-faire policy toward cartels into a positive program of collectivistic economic nationalism. Once private business starts a cartel program, its demands for government assistance in protecting group interests, and indirectly national interests, tend to become more insistent. With patriotism in the background, perhaps even in the foreground, such demands are difficult to resist. Moreover, they tend to broaden, to involve national prestige and influence the course of international diplomacy.

Protection of the home market may not be enough. Foreign producers not members of the cartel may constitute a threat to cartel arrangements covering common export markets. This may result in efforts of the leading cartel producers to have their home governments bring diplomatic pressure on the governments of countries whose producers fail to cooperate in cartel activities. Thus the British and German industrial groups at their Düsseldorf conference in 1939 recognized that:

. . . in certain cases the advantages of agreements between the industries of two countries or of a group of countries may be nullified by competition from the industry in some other country that refuses to become a party to the agreement. In such circumstances it may be necessary for the organizations *to obtain the help of their governments* and the two organizations agree to collaborate in seeking that help.[22]

Had the war not prevented the British and German industrialists from carrying out the Düsseldorf program, the need for such help would probably have arisen. The governmental support contemplated would presumably have involved coercive measures aimed at the noncooperating industries of exporting countries with a public policy opposed to cartels. The United States is a conspicuous example of such a country. The American Government could hardly

21. Sir Alfred Mond, *Industry and Politics*, Macmillan, London, 1928, p. 246.
22. Italics supplied. See Chap. 2.

have remained indifferent to a direct attack on the nation's export industries, and in particular to an attack that flouted established American commercial policy.

Because cartels are instruments of national commercial policies, or challenges to them, no government can afford to ignore them. Simply to leave them alone is to invite discrimination against, or injury to, socially justified national economic interests. A policy of laissez faire is almost certain, therefore, to give way to one of direct collaboration between domestic industrial groups and the government to protect and promote national interests in a cartelized world economy. Far from relieving governments of responsibility for economic planning and industrial regulation, laissez faire stimulates the forces making for national economic autarchy.[23] For this and other reasons, policy makers are likely to reject laissez faire.

If governments reject both laissez faire and the national economic autarchy to which it generally leads, the choice narrows down to two broad policies. They may try to abolish or greatly limit cartel arrangements. Or they may authorize cartel arrangements but subject them to administrative controls designed to protect the public interest against abuses. If governments choose a policy of administrative control, they then have the alternatives of regulating cartels by establishing standards for their guidance or of directly participating in their formation and operation. Whether governments attempt to prohibit or to control cartels, they may proceed either unilaterally or in collaboration.[24]

23. The experience of the French nitrogen industry illustrates the manner in which governments and private cartel groups are prone to collaborate in shaping national trade policies. When the European nitrogen cartel broke down in 1930, the French Government placed imports under a licensing system. In effect, the first licenses confirmed an agreement between the French and German nitrogen cartels on production and prices. An advisory committee including members of the French nitrogen industry thereafter assisted the French Government in regulating the market. During the 1930's European governments frequently collaborated with private cartels in regulating imports and exports under a quota system. See Robert P. Terrill, "Cartel Policy and International Security," in *A Cartel Policy for the United Nations,* Columbia University Press, New York, 1945, p. 52.

24. A strict policy of laissez faire toward cartels would mean abandonment of all prohibitions and controls. Of course, a government might follow such a policy on a unilateral or on a multilateral basis. But in either case, the strict let-alone policy leads in practice to unilateral support of domestic industrial groups in their negotiations with other national groups. As strict laissez faire means a rejection of a positive policy, the discussion here concerns only the relative merits of a unilateral and a multilateral approach to the alternative *positive* courses—curbing or controlling cartels. See text following.

*Unilateral vs. Multilateral Action*

Inability to reach agreements with foreign powers on cartel policy will, of course, force the United States to adopt independently whatever policy it believes will best promote its national interests. Whether unilateral action aims to prohibit or to regulate cartels, it has severe limitations. These are now more serious than ever before.

America emerged from World War II the most powerful and the richest nation in the world. The economic dislocations and distress of Europe and the Far East are difficult to appreciate in their magnitude and complexity. While England remains economically and politically stable, its loss of foreign investments has tremendously complicated its problem of paying for necessary imports. Britain's standard of living and its economic progress depend vitally on foreign trade. Unless America in collaboration with the other trading nations can devise common commercial policies for effectively safeguarding free markets, conditions may force these nations—and perhaps the United States—to seek refuge in economic nationalism or economic regionalism.

Furthermore, the United States and Great Britain would find it difficult to isolate themselves from the effects of economic restrictionism or economic stagnation in any important sector of the world economy. In this One World of today poverty is indivisible. To the extent that cartels restrict investment, retard technological progress, raise prices, restrict output, or foster unemployment, no great trading nation can be indifferent to their prevalence abroad, regardless of whether they directly curb its export trade.[25]

The American public has its own special stake in the cartel problem. The United States cannot by unilateral action adequately protect American consumers against the adverse effects of cartel arrangements covering those products for which they rely on foreign sources of supply. Such commodities are numerous, and important in the aggregate. They include tin, cocoa, coffee, sugar, quebracho, in-

25. The belief that cartels do directly handicap American exporters led Congress to pass the Webb-Pomerene Act in 1918. An American business executive has recently declared that the need for collaboration in foreign markets persists. "American business even at its strongest is relatively helpless against the competition of well-organized foreign business *supported by the power of their governments.*" Perkins, *op. cit.*, p. 572. Italics in original. Whether or not Congress in 1918 and the author of this article in 1944 were right, the adverse effects of cartels, indirectly, on international trade are indisputable.

dustrial diamonds, nickel, crude rubber, and quinine. Experience under the rubber restriction scheme of the twenties indicates the significance of foreign cartels to the American economy. Winston Churchill is said to have defended that cartel because rubber was "one of the principal means of paying the [British] debt to America." [26]

*Defects of Unilateral Action May Be Exaggerated*

American experience indicates that an independent anticartel policy is not altogether ineffective or futile. Since 1890 the United States has been committed to an antitrust policy. Even without benefit of Webb-Pomerene associative action in foreign markets, many American firms operate on so large a scale that they are at no disadvantage, as compared with cartelized industries abroad, in getting business in neutral markets.

The United States Steel Corporation's productive capacity, for example, is almost double the largest annual prewar production of the entire German steel industry. The steel cartel found that American participation was essential to its success. The situation of the leading American tire producers and automobile manufacturers is similar to that of Big Steel. They produce on such an unexampled scale that they are under little or no handicap in selling their products in neutral markets where cartels operate. They can break through organized market control arrangements.

Except where a cartel depends for its power on the close control of limited raw materials, as in nickel, on the monopoly privileges of letters patent, or on some public franchise, it is vulnerable in a contest with aggressive producers nurtured in a free-enterprise economy. Despite its formidable façade and its wide coverage, the 1938 international nitrogen cartel recognized its own inherent weakness. It authorized the German, English, and Norwegian group (DEN) to terminate the cartel agreement whenever any synthetic producer not a member of the cartel exported more than 10,000 tons of nitrogenous fertilizer in a year.

Davids armed with slingshots have slain heavily armored Goliaths. But the protection and promotion of American export trade does not rest solely in the hands of business Davids. More frequently

26. From a public address quoted in Charles R. Whittlesey, *Governmental Control of Crude Rubber,* Princeton University Press, Princeton, 1931, p. 39.

American exporters are themselves industrial giants without whose cooperation few world cartels could last. The closely knit aluminum cartel could not have survived a forthright challenge from Alcoa, which with its Canadian affiliate controlled more than half of world capacity even before the war. The *quid pro quo* Alcoa obtained in the aluminum cartel was not merely equal treatment (a "fair share") in foreign markets but protection in the rich American market.[27] General Electric no doubt found its agreements with the leading foreign producers for exchange of patents covering incandescent lamps a profitable method of exploiting its monopoly privileges in foreign markets. The most significant feature of the whole arrangement, including not only these agreements but the Phoebus cartel scheme and General Electric's supplementary investments in foreign licensees' stocks, was something else: the protection it gave General Electric in exploiting the huge American market.[28] The incandescent lamp cartel rested on a foundation that General Electric helped construct, and the entire structure would have collapsed had General Electric withdrawn its support.

Recent antitrust suits reflect the importance of American participation in international cartels. They also indicate the vulnerability of these arrangements under American antitrust laws. During the six years ending January 1, 1945, the Department of Justice started some 52 proceedings against international cartels, involving 105 different products. The defendants included 165 business concerns, of which only 36 were foreign companies. In 15 of these cases the courts entered final decrees adverse to the defendants.[29]

27. See *U.S.* v. *Aluminum Company of America, et al.*, 148 Fed. *2d* 416. The court held (pp. 444-45) that the defendants had not met the burden of proof to show that the restrictions on aluminum imports to the United States under a specific provision of the 1936 cartel agreement had not, in fact, materially affected American foreign commerce. See also *Cartels in Action*, Chap. 6.

28. See *U.S.* v. *General Electric Co., et al.*, Civil Action No. 1364, in U.S. District Court for the District of New Jersey, Complaint filed January 27, 1941. See Complaint (mimeographed copy), pp. 19, 44-45, and Ex. G, Art. III. The trial of this case started in the spring of 1943, was suspended shortly thereafter for the duration of the war, was resumed three years later, and concluded with oral arguments early in 1947. By June 1, 1947, the court had not announced its decision. See also *Cartels in Action*, Chap. 8.

29. *Cartels and National Security*, Subcommittee on War Mobilization of the Committee on Military Affairs, U.S. Senate, 78th Cong., 2d sess., pursuant to S.Res. 107, Report No. 4, Washington, November 16, 1944, Pt. II, pp. 37-60. (The documents published by this subcommittee will hereafter be cited: Kilgore, Pt. —.) The 52 cases involve some duplication, for the Department of Justice in several instances instituted both civil and criminal proceedings against the same defendants. Many of the cases were still pending on June 1, 1947.

Private cartels are often highly unstable. They may crumble even without government opposition. In fair weather, members of an industry may work together for greater profits through cartel controls; paradoxically, when the economic prospect turns cloudy they often strike out on their own. One economist has picturesquely described the lack of cartel cohesion in British industry during the depressed thirties as follows:

> At the very time when cartels were holding out their most alluring prospects of a safe if not comfortable journey through stormy seas, a lot of people were rigging up their rowboats with individual outboard motors, and going overside.[30]

### *Procedural Difficulties Under Unilateral Action*

Though the deficiencies of unilateral action can be exaggerated, they are none the less real. One of the chief difficulties is procedural. Cartel members generally negotiate their agreements in tolerant countries and keep the cartel records there. Hence, even when American firms take part in cartels, American public officials charged with antitrust enforcement have access to little primary information on cartel structure or operations. This increases the difficulty of establishing facts and reaching offenders. Furthermore, foreign courts may enforce a contract that American courts would regard as an unlawful conspiracy in restraint of trade.

But the greatest drawback to unilateral action is the danger that it may lead to retaliatory measures by foreign governments. Foreign producers confronted with the competitive power of American mass-production industries usually shrink from an open-market contest, however well organized they may be. Rather than risk the disruption of "orderly marketing" arrangements in a contest for consumers' favor, they generally seek the assistance of their governments. Experience between World Wars I and II indicates that they can ordinarily count on receiving it, in the form of tariffs, export subsidies, or other devices, used singly or together. By these means zealous nationalism during the thirties managed to put world trade into a strait jacket.

If a government shapes its policy toward regulating rather than

30. Ben W. Lewis, "The Status of Cartels in Post-War Europe," in *A Cartel Policy for the United Nations*, p. 32.

prohibiting cartels, the disadvantages of unilateral action are not diminished. If one government gives cartels a legal status and subjects them to regulation, the major trading nations must apply common regulatory standards to adequately safeguard both national interests and the interests of cartel members.

*The Case for Regulation*

In the United States most advocates of a program for regulating cartels contend that the forces making for cartelization are too powerful for an American policy to control singlehandedly. As one writer has expressed it, "Completely open competition in international trade is dead for the foreseeable future." [31] Whether one likes it or not, it is argued, other nations will accept cartels and "*the pressure of circumstances will tend to make us accept them because other nations*" accept them.[32]

None of the numerous defenders of international cartel agreements has formulated a thoroughgoing plan for protecting the public interest against cartel restrictions. Usually the suggested plans contemplate purely national procedure. The National Foreign Trade Council recommends, for example, that Congress require American business firms to file with the Department of State copies of their international business agreements. The Council also proposes that the Department should, when an interested party so requests, give revocable approval of any proposed agreement which the Department finds does not constitute an unreasonable restraint of trade within the United States "when considered in the light of the foreign laws and our foreign economic policy." [33]

*Registration of Cartel Agreements*

Such proposals might, of course, fit into an international program, with registration and review lodged in an appropriate division of the United Nations. But whether they are embodied in national statutes or in international treaties, behind these proposals lie two assumptions of doubtful validity. These are: first, that exposure of cartel

31. Perkins, *op. cit.*, p. 570.
32. *Ibid.*, p. 573. Italics in original.
33. "Resolution on International Business Agreements," National Foreign Trade Council, New York, January 26, 1945. Milo Perkins makes substantially the same proposals (*op. cit.*, p. 576).

arrangements to critical public review will bring about voluntary elimination of their worst features; and second, that an official reviewing agency will strike down those arrangements that are unduly restrictive.

It would often be against the immediate interest of business firms to reveal all the details of arrangements designed to enhance their profits by restricting competition. They are perhaps more likely to conceal objectionable features than they are to eliminate them. This danger would be particularly great if the administrative agency were an international body. Its sphere of authority would be broad, but its powers would be correspondingly weak. Such an agency would necessarily rely on national governments to enforce its rulings. Prevailing political preconceptions and business mores in many countries would limit, and sometimes block, the will and power of their officials to enforce international decrees, especially those which aimed at preserving competition and involved curbs on business profits. Moreover, even with full disclosure of essential facts, the wisest and most public-spirited administrative agency could not determine in advance what would be the effects of any particular cartel plan in practice.

Experience with registration in European countries indicates its futility as a singlehanded regulatory measure. Before World War II, eleven European countries required their nationals to register cartel agreements with an appropriate government agency.[34] In certain jurisdictions lack of clarity of definition resulted in a needless burdening of the record with data of little or no practical value for control purposes. According to a report of Société d'Étude Législative, some definitions were in such vague terms that "Every simple understanding of a duration of only a few days or weeks, every contract whether significant or not, every agreement between parent corporation and subsidiary, as well as decisions of syndicates [had to] be published." [35]

On the other hand, evasion, or neglect to record significant agreements, apparently was widespread. In Norway, for example, though

34. Eight countries specifically protected trade secrets. *Memorandum on Regulatory Measures Affecting American Foreign Trade,* National Foreign Trade Council, New York, September 1944, p. 112.

35. Quoted in Heinrich Kronstein and Gertrude Leighton, "Cartel Control: A Record of Failure," *Yale Law Journal,* February 1946, p. 327.

practically every branch of industry was cartelized, the registration bureau reported the filing of only 192 cartel agreements and only 51 "undertakings." [36] As in Germany, cartel members in Norway may have failed to register some of their agreements. Kronstein, a careful student of European cartel experience, concludes that "registration served as a means of enhancing the power of monopolies rather than as an aid to their control." [37]

*Consumer Representation*

A more novel proposal is that consumer representatives sit in cartel councils as watchdogs of the public interest. Not all types of cartel arrangement lend themselves equally well to control through consumer representation. Cartels differ greatly in the circumstances out of which they have arisen, in the forms they have taken, and in their effectiveness. A single corporate enterprise has sometimes acquired control of all major sources of supply of an important raw material. Other cartels have originated in patent grants or agreements to exchange patents and processes. Many cartels have been secret; others have been open and have had the approval or active participation of governments. The variety of forms which such arrangements have taken and their frequently surreptitious character complicate the problem of protecting the public interest through consumer representation.

The problem of public control through consumer representation is partly one of bringing cartels into the open and reducing them, in so far as practicable, to some standard pattern. Consumer representation must, therefore, be combined with registration. A first step would be the establishment of an international administrative body (presumably some division of the United Nations) authorized by international agreement to require submission of certified copies of international cartel agreements for official review. In those countries that now prohibit cartel participation by their nationals, a second step would be relaxation of domestic antitrust laws. This would reduce the incentive to conceal relevant data, although it would not insure full disclosure. The obstacles that would have to be overcome to

36. This term evidently refers to corporate mergers, or financial hookups, between Norwegian enterprises and foreign interests. Whether any duplication occurred in these filings does not appear from the record.
37. Kronstein and Leighton, *op. cit.*, p. 328.

provide even these minimum essentials for a policy of cartel legalization and regulation are manifest. But even if a satisfactory solution of procedural problems is assumed, the question remains how effectively governments could safeguard the public from the evils of monopoly by making it obligatory for cartels to include consumer representatives in their governing councils and to give such representatives a voice in decisions on such matters as price and output.

Proposals of this sort have never been clearly defined. If consumers are merely to have a voice in the discussion of cartel policies, the final decisions resting with producer groups, it is unlikely that their representatives could accomplish much. Their influence would probably be especially small if they represented ultimate consumers. The producer's interest is specialized, well organized, and concentrated. The consumer's interest is nonspecialized, unorganized, and diffused.

For example, a multitude of persons scattered throughout the world consume tin, and their expenditures on this metal represent only an insignificant item in their monthly or annual budgets. For the Bolivian tin producer, tin is a 100 per cent interest; for the American consumer it is an infinitesimal interest. Under such circumstances, the views of consumer representatives are not likely to carry great weight. Effective consumer representation at the ultimate consumer level is difficult to achieve, if not impossible.

### *Representation by Industrial Consumers*

The suggestion has been made that governments could protect the interests of ultimate consumers by giving industrial users, or distributors (who are in a sense consumer agents), representation in the councils of cartels comprising the producers from whom they buy. These "first purchasers" presumably are interested in keeping their costs for materials, parts, or merchandise at a minimum.

To continue with the example of tin, it may be doubted that ultimate consumer interests would be safeguarded by giving nonintegrated refiners of tin or independent fabricators of tin products representation in the metal cartel. These producer-consumers are "producer-minded," and as business groups they appreciate the virtues of stable markets. Under a system of cartel controls tin plate manufacturers are likely to be more interested in preventing pref-

erential prices to a competitor than in securing lower prices for all. Also, they have a bias against price decreases in so far as they have capital tied up in inventories, whether of pig tin or of tin plate. If public policy sanctions cartelization of world trade, they will presumably become members of a well-organized cartel. They will have subscribed to the doctrine of live and let live.

Moreover, as lower prices of raw materials or parts might encourage a competitor to cut prices of finished products, they are likely to oppose price reductions in these fields. In the manufacture of tin cans, for example, it has long been the practice to tie the price of cans to the price of tin plate. The interest in stable prices on the part of a seller of tin cans, such as the American Can Company, may be, and in truth has been, opposed to any price reduction on tin plate, because such a reduction might tempt competing can manufacturers to lower their prices. It would hardly be safe to leave protection of ultimate consumer interests in the hands of intermediate industrial consumers, a group having many interests in common with first-stage producers.

### *Representation by Consuming Countries*

Assuming that cartels are made legal, consumers must have an equal voice with producers in determining cartel policies if consumer representation is to be more than a sham. One plan that has been advanced for such representation on cartel councils is the appointment of government delegates from countries having primarily a consumer interest in the given commodity.

This idea obviously contemplates government participation in the making of cartel agreements, as well as in cartel management. Advocates usually limit the proposal to so-called commodity agreements, by which they mean intergovernmental pacts to regulate the marketing of raw materials, or perhaps of agricultural products only.[38] But procedurally, no limitation inherent in the proposal so

38. Thus, the United States Department of State has observed: "The production of, and trade in, primary commodities is exposed to certain difficulties different in character from those which generally exist in the case of manufactured goods . . ." Accordingly, the Department rigorously limited to this field its proposals for the regulation of international markets through intergovernmental agreements. See *Proposals for Expansion of World Trade and Employment*, Department of State, Washington, November 1945, Chap. 5, p. 20.

Within this limited field, the Department proposed (Chap. 5, Article 5, Section b)

restricts its field of possible application.[39] Governments could, if they would, assume the role of protectors of the interests of their citizens as consumers of manufactured goods, as well as the role of guardians of their interests as consumers of primary products.

Some countries possess a well-defined interest as exporters of specific products, while others, as *importers of those particular products*, possess a well-defined consumer interest.[40] The interests of both groups of countries deserve vigorous assertion and adequate protection in every cartel set up, assuming public policy approves cartelization of world markets. Consumer interests in the aggregate are no less vital than producer interests. In the negotiation and administration of cartel agreements, therefore, no compromise of the principle of equal representation should take place.

But even balanced voting power between producer and consumer countries would probably not work out in practice to give equal protection or anything like a balance of advantage to both groups. To underwrite cartelization as a system for stabilizing international markets would be to underwrite a program that has as its rationalization and its immediate objective the protection of producer interests. It would be extremely difficult, if not impossible, to adjust producer and consumer interests so that neither was subordinate to the other. Judging from experience in the negotiation of commercial treaties, each country as a bargaining unit would be mainly concerned to advance the interests of its nationals as producers.

Were representation in cartel councils to rest on a political basis,

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that: "The members [countries] adhering to such agreements which are largely dependent for consumption on imports of the commodity involved should, in any determinations made relating to the regulation of prices, trade, stocks, or production, have together a voice equal to those largely interested in obtaining export markets for their production."

39. Substantively, with the question in mind of the economic need or advantage of collective regulation of international markets for raw materials as compared with that for other classes of goods, a radical difference may exist. It is from this point of view, primarily, that the discussion of commodity (raw material) agreements proceeds in Chapter 9 of the text.

The broader implications of government participation in cartel making and management are discussed later in the present chapter. At this point the main concern is with the analysis of possible mechanisms for protecting public interests in the event of the adoption of a policy of sanctioning cartel agreements.

40. For certain kinds of goods the differentiation on a national basis between producers and consumers is not very clear-cut. In general, however, it might be practicable to make those countries with a net import balance for a given product eligible to take part in the nomination and election of consumer representatives on any cartel set up for the product in question.

those countries that as net importers of a particular good would presumably be the guardians of consumer interests in that field could probably find an excuse for sacrificing those interests—bowing to the demands of the producers. An official who sacrificed consumer interests in negotiating a cartel when his country was a net importer of the commodity should have little trouble in getting a reciprocal concession in other fields from countries representing producer interests in this commodity and consumer interests in the other fields. Thus, the main thrust of cartel policies would probably continue to be toward protection of established industries. It would be difficult to prevent the triumph of producer interests through logrolling, mutual back-scratching, and trading of votes.

### *Experience With Consumer Representation*

Experience with consumer representation in cartel directorates, though limited, tends to bear out the foregoing analysis. The international rubber cartel (IRRA) provided for a sort of consumers' council, consisting of representatives of rubber manufacturers, one each from Great Britain, Germany, and the United States, to sit with the cartel governing board, IRRC.[41] The annals of the cartel do not disclose the precise role these industrial consumer representatives played, or the influence they exerted. Their functions, it is pertinent to observe, were entirely advisory.

IRRA's structure practically precluded adequate protection of consumer interests, however wise, resolute, and fair-minded the rubber manufacturers' representatives may have been. The cartel froze the quotas of the several producing regions, thereby assuring each a fixed share in the market, regardless of whether it was a high-cost or a low-cost producing area. No change in the comparative cost of production in different regions could alter the apportionment of total exports among member countries, though the agreement gave the cartel managers discretionary power to adjust the exportable total from time to time as changing market conditions might dictate.

The cartel's policies on export restriction and prices were more moderate than those under the earlier Stevenson Plan, but the his-

41. See K. E. Knorr, *World Rubber and Its Regulation,* Stanford University Press, Stanford University, 1945, Chap. 6. The 1938 agreement increased American advisors to two.

tory of the scheme provides slight ground for attributing this to the influence of consumer representation.[42] The cartel's moderation, in fact, probably reflected a determination to avoid the criticism and obloquy brought on its predecessor by its excesses. Nevertheless, IRRC's policies showed marked solicitude for producer welfare. Recommendations of the consumer representatives seldom embarrassed IRRC.

The role of consumer advisors in the tin cartel was even more flaccid. The International Tin Committee, appreciating "the importance of the help" consumer representatives could give, invited a panel representing the chief consuming countries to attend its meetings when any subjects directly concerning the interests of consumers were under discussion.[43] However, the Tin Committee recognized no direct consumer interest in prices and production. It sought no consumer advice on these matters. The occasional and apparently casual consideration the Committee gave to suggestions of consumer advisors in no way interfered with active promotion of producer interests.[44]

An international treaty extending to all cartels the provisions of the projected International Trade Organization (ITO) charter applying to intergovernmental commodity agreements might give consumer representatives a more positive voice in cartel management. But the traditional support of the principle of self-government in industry in many countries and the tenor of recent discussions on this subject in influential quarters justify skepticism about a general endorsement of this feature of the ITO draft charter.[45] In any event consumer representation on cartel directorates gives little promise of transforming them into satisfactory organs of industrial control.

42. See *Cartels in Action*, pp. 78-85, especially p. 82, n. 42. Cf. Sir Andrew McFadyean, *The History of Rubber Regulation*, 1934–1943, G. Allen & Unwin, London, 1944.

43. This diplomatic gesture apparently resulted from Secretary of State Hull's criticism of the tin cartel expressed through the American delegation to the World Economic Conference in 1933. The general outcry against the cartel's price policy may also have been a factor prompting the move. See K. E. Knorr, *Tin Under Control*, Food Research Institute, Stanford University, 1945, p. 247.

44. See Chap. 5.

45. The *Resolution on the United States Government's Proposals for Expansion of World Trade and Employment*, adopted by the Council of the International Chamber of Commerce at its 64th meeting in Paris on June 20 and 21, 1946 (I.C.C. Brochure No. 101, Paris, 1946) declares (Article XIV): "When agreement is necessary in order to restore or maintain stable economic activity, it should normally be concluded *between the producers directly concerned*, unless they are too numerous and dispersed to make this possible." Italics supplied.

Adequate means of regulating cartels in the public interest must be sought elsewhere.

### *Competition as a System of Control*

Public interest in the world economy is many-sided. In terms of the competitive ideal—which is never completely realized in practice—a free market safeguards a wide range of defensible interests. In a free market competitive forces tend to establish equilibrium within and among industries. The price system registers the push and pull of competitive forces and provides the guideposts for economic action. Watching the signals, businessmen have a strong incentive to allocate productive factors among their innumerable possible uses in accordance with consumer preferences.

A genuinely free market encourages the introduction of improved techniques whenever their use will lower total unit costs. It tends to reduce prices to the socially necessary costs of production. A consumer willing and able to pay this much is entitled to the commodity or service. A producer has a justifiable claim to the same price and to no more. In brief, competitive markets provide a mechanism that allocates resources, organizes production, distributes income, and rations goods in a manner which, while it may not meet every criterion of equity, has at least one outstanding virtue: it adjusts the opposing forces, composes the conflicting interests—inherent in any economic system—with less coercion, repression, and frustration than any alternative system of which society has had any experience or with which it has shown any disposition voluntarily to experiment. It provides unity in diversity, stability in change. And neither this unity nor this stability is a false mask, a vain pretension. No artifice created them; and no artifice can upset or destroy them. They stem from the spontaneous growth of a balanced economy.[46]

To abandon competition as a mechanism for controlling economic activity is to transfer the functions that free markets perform to some other agency of control. Experience shows that when private producer groups acting together establish control over an industry, the public interest is not adequately safeguarded. Subjecting cartels

46. All this applies to the ideal model of a system of free competition. But it also applies to any actual economic system shaped on that model in so far as it is essentially free and genuinely competitive.

to superficial controls will not eliminate cartel abuses—restricting output, raising prices, curbing investment, retarding technological advance, all for narrow, private advantage. Hard experience with the perennial problem of policing the channels of trade teaches that pretentious façades of authority are worse than no authority at all. The problem of harnessing business enterprise to the service of the community will never be solved by stretching gossamer strands of discipline over its shoulders and around its flanks. A free society must exercise eternal vigilance against sham devices, too likely to prove a snare and a delusion.

### *Commission Regulation and Public Ownership*

Competition is not, of course, the only system of control by which a democracy may safeguard public interests. Modern society has had experience chiefly with two others: regulation, as in the case of public utilities, and state ownership or direction. In certain areas of economic activity, where duplication of facilities means waste, governments have tolerated private monopolies or deliberately created them. When they have done so, they have not asked the public to surrender without a *quid pro quo* the safeguards that competition affords. They have made private monopolies public utilities. They have granted private enterprises in these special fields public franchises and subjected them to regulation (of recent years generally administrative regulation) in the public interest.

Society has steadily enlarged the scope and the powers of administrative agencies.[47] Public utility commissions in the United States customarily wield authority over quality of service, over prices and investments—in truth, over nearly the entire range of decisions shaping the course of economic activity in the regulated industries.[48] As with competition, so with public utility regulation, a gulf separates the ideal from the actuality, the aim from the achievement. But despite the shortcomings of public utility regulation its record is not such as to warrant its abandonment. In fact, no

47. For a comprehensive survey of the development of federal boards and commissions, see Robert E. Cushman, *The Independent Regulatory Commissions,* Oxford University Press, New York, 1941.

48. For a summary of both state and federal experience in this sphere, see L. Lyon and associates, *Government and Economic Life,* The Brookings Institution, Washington, 1940, Vol. II, Chaps. 21, 22.

influential group, business or otherwise, agitates for a return to competition as a means of regulating railroads and other utilities.

Unfortunately, regulating cartels is a problem of far greater complexity and magnitude than regulating public utilities. Public regulatory commissions have dealt primarily with monopolistic enterprises that sell special services in relatively narrow markets. Except in the transportation field, the question of comparative efficiency of alternative sources of supply has seldom presented itself, and this has greatly simplified the problem of control. In contrast, conditions of supply of commodities subject to international cartel management vary greatly.

For example, consider the significance, for a socially guided program of price and output regulation, of the diversity of the sources and the conditions of production of nitrogen. Natural nitrate of soda comes only from Chile. It normally accounts for about half of Chilean mineral production and is Chile's most important export.[49] The price of nitrate is, therefore, of pre-eminent importance to Chile. Before World War II every major industrial country was producing synthetic ammonia, which shared the market with Chilean nitrate. World synthetic capacity increased sharply during the war. Calcium cyanamide, another synthetic product, also meets part of the demand for nitrogen. Byproduct coke ovens and gas works are a fourth source of nitrogen supply. Their output of sulphate of ammonia depends not at all on the demand for fertilizers, explosives, and other products of which nitrogen is a constituent, but on the rate of steel production and on the demand for artificial gas.

*Complexity of the Problem of Administrative Regulation*

The problem of regulating the price of electric current, a homogeneous product, sold to residential or industrial consumers in compact urban areas, each of which and often several of which a single power plant can serve, differs greatly from that of regulating the world price of nitrogenous products. Because of the diverse conditions of nitrogen production, it is far more difficult to determine what constitutes a salutary policy for regulating output and prices in this field.

Puzzling questions are bound to arise. To what extent shall a

49. On the Chilean nitrate industry, see *Cartels in Action,* Chap. 4.

regulatory commission sacrifice the interests of low-cost producers in order to protect high-cost producers, or vice versa? Shall it permit the introduction of newly discovered processes to upset market stability and dislocate national or regional economies? In view of the interests of various countries in adequate domestic sources of nitrogen supply for national defense, in view of the economic interests of steel works and municipalities in adequate supplies of coke and gas (and correlatively, in getting rid of their byproduct ammonia), in view of Chile's interests in taking full advantage of its unique natural resource, how will an international regulatory agency control productive capacity and output?

If it fixes prices on a remunerative basis for high-cost producers, the result may be inordinate profits to low-cost producers and a stimulus to expansion of capacity. On the other hand, if the regulatory agency fixes prices on a level adequate for low-cost producers but unremunerative for some established sources of supply, for example Chilean producers using the outmoded Shanks process, the result may be to force whole communities into poverty and bankruptcy. But this is not all. Control of nitrogen is not enough. Because steel works and gas works produce nitrogen in large amounts as a byproduct, effective regulation of the nitrogen market could hardly avoid extension of control over these related industries.

Such are some of the ramifications and complexities that would confront regulatory commissions in subjecting cartel arrangements to effective control. Mere statement of the problem indicates the shortcomings of the regulatory device. Human ingenuity is too limited and political and economic interests are too diverse to permit successful public supervision of complicated, far-flung, world-encircling industrial activities.

The more immediate obstacle to effective control of international cartels through regulatory commissions of the public utility type is political. To devise effective administrative machinery for the regulation of international cartels will remain an insoluble problem until this becomes One World politically as well as economically. As matters stand, national states will scarcely consent to surrender their sovereignty piecemeal by turning over to international administrative agencies like a cartel regulatory commission such extensive powers as implementation of this proposal would involve. Policy

makers need give no serious consideration to such a program because it is neither politically nor economically feasible.

*Control Through Direct Government Participation*

Government direction of enterprises, as a substitute for competition, might provide adequate safeguards to the public interest. Governments have frequently resorted to this device domestically. In most nations today, governments direct national defense, the building of roads, the maintenance of recreational and educational facilities, the postal service, and numerous other enterprises. Public opinion generally regards them as so vital to the public welfare that the state seldom tries to equalize the price of the service and its cost.

Since the first world war the range of governmentally directed enterprise has greatly expanded. Before World War II, governments confined their direct participation in economic activity mostly to domestic enterprises. However, the operation of such enterprises had led them, in some instances, to take part in international cartels. The Prussian Government was one of the largest producers of potash before World War I. It led in the organization and operation of the several successive potash cartels, and after the annexation of Alsace-Lorraine by France, the French potash producers, including governmentally operated mines, joined with the Germans in reorganizing the international cartel.

Similarly, the German Government as the principal owner of VAW and VSW, the largest domestic producers, respectively, of aluminum and steel, was indirectly a member of the international cartels in these industries. The Spanish and Italian Governments, as producers of mercury, exploited international mercury markets through a common selling agency. The Netherlands Government, as owner of the largest tin-mining company in the Dutch East Indies, played an important role in the tin cartel.

In all these instances governments as cartel members behaved precisely like private proprietors. They argued over quotas, making such concessions as were necessary to insure joint action to advance the collective interests of the several producers. They agreed to restrict output and to sell at noncompetitive prices. They implemented cartel decisions with governmental commercial policies. In

short, their apparent object was to maximize earnings at the expense of consumers—foreign or domestic, but mostly foreign.

In recent years governments have not confined their participation in cartels to those industries in which they have an investment. They have intervened to assist and direct cartels in numerous other industries. In general, the extent of their participation in cartels has tended to vary with the processing stage of the industry. They have intervened most frequently in (1) cartels regulating the production and sale of raw materials, less frequently in (2) industries producing standardized staple manufactures, and least frequently in (3) industries turning out specialized finished products.

The frequency and the extent of government participation in cartels in these three classes of industry reflect in a general way the importance of government aid to enforcement of an output restriction program. Governments have sponsored cartels chiefly in those fields where it is difficult to organize self-help, because of the number and dispersion of producers, or where failure to stabilize an industry might bring serious repercussions throughout a national economy.[50] Sellers of raw materials—particularly agricultural staples—are generally numerous and widely scattered. As a rule they occupy the dual role of workers and owners. In many instances, the entire economy of a country revolves around one or two primary products because other economic opportunities are limited.

In manufacturing industries, however, particularly in the finishing branches, a few sellers frequently dominate the markets; labor is relatively mobile; and the economic welfare of a country seldom depends heavily on a single branch of manufacture. Under these circumstances private producers usually can, and often do, stabilize their markets through collective action without outside aid or encouragement.

As effective regulation of private cartels is extremely difficult if not impossible, and as the public is not disposed to leave them alone,

50. On an international basis, governments have taken part directly in schemes of more than regional scope to regulate the production or marketing of eight classes of commodities: tea, coffee, sugar, wheat, rubber, tin, beef, and fish. In addition, acting unilaterally or multilaterally for a narrowly limited market area, they have set up controls for a number of other primary products, including timber, cocoa, and jute.

See *Intergovernmental Commodity Control Agreements,* International Labor Office, Montreal, 1943; and J. Tomasevich, *International Agreements on Conservation of Marine Resources,* Food Research Institute, Stanford University, 1943.

the practical range of choice in formulating public policy narrows to two courses: direct government participation in the negotiation and management of cartels, and government prohibition of all cartel arrangements supplemented by a program designed to insure competitive conditions. These two policies are not of necessity mutually exclusive, though as the area expands within which concerted or coercive controls operate, the area within which competition operates must in similar measure contract. Moreover, unless control policies aim at substantially the same goals as those which competition tends to realize, they will make economic maladjustments permanent and promote disequilibrium in the economy as a whole.

*Prospects for Direct Government Participation*

Public opinion in America quite generally condemns cartels when they wear no mask. It is more tolerant of them under the name of international commodity agreements. Government participation in the organization and management of such schemes of market control tends to allay suspicion and generate confidence. As cartels make decisions involving the volume and direction of international trade, direct government participation has something to recommend it. On the other hand, the objections also deserve consideration. One of the principal objections is that government participation makes for secure and permanent control. Recalcitrant producers may be brought and kept in line and vested interests in a continuance of government control are almost certain to be established. Another objection is that government participation fosters inflexibility in administration.[51] To transfer bargaining in these matters from private to official hands does not guarantee promotion of the general welfare, but it certainly provides more opportunity for protecting national interests.

Governments are likely, therefore, to participate in a good many such international commodity agreements in the postwar period. The United States is already a party to the sugar, wheat, and coffee agreements. It has taken part in negotiations looking toward agreements covering cotton and oil. It has a vital interest in guaranteeing

51. For further discussion of these issues and of means to implement an intergovernmental commodity agreements program if such a policy were adopted for a limited range of industries, see the following chapter.

access to strategic materials—a goal which requires collaboration with other governments. Moreover, the government is under commitment to support prices for domestic agricultural products, even though it may have to subsidize agricultural exports and thus lead other countries to retaliate—unless the United States collaborates with them in reconciling conflicting interests.

The economic characteristics of some branches of industry make them less amenable than others to effective regulation in the public interest by a free, competitive market. This may make special governmental control programs expedient in some spheres. The questions remain: how to define the limits of such special areas, and what kind of control is feasible and appropriate.

### *Curbing International Cartels*

The alternative to government regulation of or participation in cartels is to outlaw them. If an anticartel policy were limited to the field of manufacturing industry it might command broad popular support, but to implement it effectively would require more drastic measures than most people realize.

Public hostility to international cartels became pronounced in the United States during World War II. The facts brought to light in congressional investigations created a widespread impression that Axis countries had used the cartel connections of their industrialists to impair the military potential of other countries. These disclosures and wartime diplomacy helped to lay the foundations for an anticartel program.

The Atlantic Charter set forth the broad objectives of Anglo-American postwar international policy. Article IV provided that the United States and the United Kingdom

> . . . will endeavor, with due respect for their existing obligations, to further the enjoyment by all States, great and small, victor or vanquished, of access on equal terms, to the trade and to the raw materials of the world which are needed for their economic prosperity.

Article VII of the lend-lease agreement between the United States and Great Britain signed February 3, 1942 (the pattern for similar agreements with other Allies) contained more specific provisions. It looked to the "limitation of all forms of discriminatory treatment in

international commerce, and to the reduction of tariffs and other trade barriers." President Roosevelt announced American policy on cartels in September 1944 in a public letter to the Secretary of State. He declared:

> More than the elimination of the political activities of German cartels will be required. Cartel practices which restrict the free flow of goods in foreign commerce will have to be curbed. With international trade involved this end can be achieved only through collaborative action by the United Nations.

Formally at least, American policy became Latin-American policy when, early in 1945, the Inter-American Conference on Problems of War and Peace resolved:

> To seek early agreed action by governments to prevent those practices by cartels or through other private business arrangements which obstruct international trade, stifle competition, and interfere with the maximum efficiency of production and fair competitive prices to consumers.[52]

Since the close of the war the State Department has offered a more specific program for curbing cartels through international action and has sponsored the establishment of an International Trade Organization within the framework of the United Nations.[53]

### *Obstacles to Curbing Cartels*

The obstacles to a widespread agreement on a program to prohibit or curb private cartel activities are serious. Nations are by no means of one mind regarding the extent to which private business should be free to cooperate on market control. They differ not only in their traditional attitudes toward competition and in their current social ideologies, but also in their international creditor-debtor positions, in the stages of their economic development, in their dependence on foreign trade, in constitutional limitations on the exercise of public authority for the regulation of economic activity, and in many other ways. These differences will affect their attitude toward the prohibition of private cartel arrangements in international trade.

In no other nation is traditional hostility toward combinations in restraint of trade so marked as in the United States, yet even here

52. *Final Act of the Inter-American Conference on Problems of War and Peace, Mexico City, February–March, 1945,* Department of State, Washington, 1945, p. 95.

53. See *Proposals for Expansion of World Trade and Employment,* Department of State, Washington, November 1945.

antitrust policy has frequently been honored in the breach as much as in the observance. Canada and certain Latin-American countries, notably Brazil, Argentina, and Mexico, have antitrust statutes, but only in Canada are the cultural background and the institutional basis of such legislation comparable to those of the Sherman Act.[54]

Antagonism in Latin America to trusts, cartels, and industrial combinations reflects opposition to the exploitation of domestic markets and natural resources by foreign capital, rather than a bias in favor of free competition. Latin-American countries have with increasing frequency set up what in practice amount to compulsory cartels, designed primarily to protect domestic business interests against the encroachment of foreign "interlopers"—that is, against competition from abroad.

Of the European countries, only England has a traditional bias in favor of free enterprise, and there Parliament and the courts, having carried laissez faire to its logical extreme in the nineteenth century, have since World War I shifted first toward encouragement of private monopoly and more recently toward nationalization. English law tolerates contracts that aim to restrict or eliminate competition, merely withholding enforcement from those which "unreasonably" restrain trade.[55] Since 1930 the drift of British policy toward a controlled economy has been marked. Under the postwar Labor Government of Clement Attlee this does not necessarily mean an increased tolerance of private restraints on trade, but it does mean an increased tolerance of collective control of the market.[56]

In the rest of Europe, trade was pretty generally cartelized before the war. Although the European nations recognized in greater or

54. See Lloyd G. Reynolds, *The Control of Competition in Canada*, Harvard University Press, Cambridge, 1940, and *Regulation of Economic Activities in Foreign Countries*, TNEC Monograph No. 40, Washington, 1944, pp. 130-31.

In Canada authority over business activity is far more decentralized than in the United States, the Canadian provinces having relatively more power in these matters than the American states. On the whole, this works out to a less positive development of antimonopoly policy than in this country and to a reliance on criminal proceedings alone.

55. Under British precedents relating to restraint of trade, the limitations on freedom of contract among trade competitors are much narrower than under American law. The leading cases are *Mogul Steamship Co.* v. *McGregor*, A.C. 1 (1892); and *Attorney General* v. *Adelaide Steamship Co.*, A.C. 781 (1913). For a survey of the development of this branch of English law, see Myron W. Watkins, *Mergers and the Law*, National Industrial Conference Board, New York, 1929, Chap. 1.

56. See, for example, Herbert Morrison, *Prospects and Policies*, Knopf, New York, 1944, especially Chaps. 5-7.

less degree the possibility of abuses inherent in a privately cartelized economy, they did little to prevent the possibility from becoming actuality. Business itself had generally rejected competition, stifled free enterprise, and adopted concerted measures for governing itself. Businessmen in Europe are extremely cartel-minded. While it is too soon to determine the precise role that private business will play in the postwar economic life of Europe, current trends point to an even greater measure of collective action than prevailed before the war.

In contrast to the United States, many foreign countries have such specialized economies, largely dependent for their prosperity on the export of one or two commodities, that they are indisposed to leave world markets for these products to the vagaries of competition.[57] Because they are economically so vulnerable, they will probably oppose a broad prohibition of cartel arrangements in international trade.

### *Prospects of Anticartel Policy*

The United States, in short, is likely to encounter stiff opposition to any effective prohibition of cartels. An international anticartel policy administered by an international enforcement agency is politically no more feasible than the regulation of cartels by an international regulatory commission—and for much the same reasons. Even if the leading nations could agree on the desirability of prohibiting international cartel agreements, they probably would not consent to enforcement of an anticartel policy by an international tribunal.

This does not necessarily mean that the possibility of an agreement among the principal trading nations to curb private cartels is illusory. It does mean that, even if an important group of countries reached formal agreement on the basic principle, responsibility for enforcement would probably in the immediate future rest largely on the separate governments. Despite the slim prospect of rigorous

57. American business does not usually need cartel protection to hold its own in competition with foreign industries. The United States is a creditor nation. Under the current policy of generous governmental lending to foreign countries for postwar rehabilitation, American industry will find it relatively easy, for the immediate future, to sell abroad. In the longer run, it should be able, with its productive capacity enlarged and strengthened by the war effort, to hold its outlets and even increase its participation in foreign markets—provided the United States is prepared to accept an increasing volume of imports by way of service on the foreign loans it has made and is making.

enforcement in these circumstances, it is worth while to seek the cooperation of other countries in freeing the channels of trade from private restraints—as far as possible. In truth, the United States has no alternative compatible with the broad goal of expanding economic activity and promoting full employment.

*The State Department Proposals*

The State Department set out an American program on cartels in its *Proposals for Expansion of World Trade and Employment,* released in November 1945. These proposals were designed as a basis for discussion in a series of international conferences on trade and employment, of which the first was held in London during October and November 1946. The section on private cartels provided for:

> . . . individual and concerted efforts by members of the Organization to curb *those restrictive business practices in international trade* . . . which have the effect of frustrating the objectives of the Organization to promote expansion of production and trade, equal access to markets and raw materials, and the maintenance in all countries of high levels of employment and real income.[58]

The chief shortcoming of this particular proposal is its generality. It apparently represents a compromise between an economically desirable goal and a politically feasible one. If private cartels are to be generally and effectively curbed, the United States and other trading nations must work out an international agreement on policy in specific, detailed terms. Do these *Proposals* lay the groundwork for such a development?

To insure a uniform application of the proposed policy would require precise definition, authentic information, and centralized administration. Presumably the "restrictive business practices in international trade" that interfere with the declared objectives include the customary cartel practices of restricting output and exports, dividing markets, fixing quotas and prices, regulating investments, and standardizing product specifications or quality. These benefit certain groups, usually at the expense of others. Differences of opinion with regard to the probable distribution of their costs and benefits make it difficult to obtain common agreement to outlaw such

58. P. 19. Italics supplied. The State Department proposes that "an International Trade Organization be created" within the United Nations to deal with trade problems. For further discussion of the ITO project, see Chap. 11.

practices. Almost everyone is against sin in general, but condemnation of sin will not insure virtue in particulars.

Prohibition of specific cartel practices would help make a multilateral international anticartel policy effective. If the leading industrial countries can agree on the broad objective of curbing private cartel practices and on the specific terms of their definition, the United States, by following a firm and consistent anticartel policy, could singlehandedly do much to make restrictive agreements ineffective. In the language of Ben Lewis, "Maybe we can't destroy 'em, but we can certainly mess 'em up!" [59] Deprived of active governmental assistance, private cartels, except when based on control of highly localized mineral deposits or on patent privileges, would find survival difficult.

*Modification of Patent Laws*

A successful anticartel program would have to supplement the general prohibition of cartel agreements and restrictive practices with measures for insuring a wider and fuller use of technological improvements. It would be necessary drastically to limit the use of patent privileges as instruments of market control. Patents and processes agreements have been an important element in many of the international cartels in which American concerns have taken part. American and foreign manufacturers of highly fabricated and specialized products have frequently resorted to such agreements in making their cartel arrangements.

On its face a patents and processes agreement may be nothing more than an undertaking between two independent business enterprises whereby each will share with the other its exclusive rights in patented or secret technology. In practice such exchange agreements have frequently become the means of eliminating competition between the parties.[60]

Although the legal status of patents and processes agreements is not always clear, the record shows plainly that American business has used patents for ends quite different from those that the Constitution and the patent laws contemplated. Conceived as a means of promoting science and the useful arts, patents have become devices

59. *Op. cit.*, p. 37.
60. For accounts of the operation of several such agreements, see *Cartels in Action*, especially Chaps. 3, 8, 10.

for stabilizing markets and governing industries. The advance of science and the liberality of patent laws have let loose a flood of exclusive privileges in the industrial world. But business has managed to control and direct the flood so as to create formidable moats around industrial strongholds and to carve deep channels for consumers' purchasing power. Through the accumulation of hundreds of "improvement" patents, based perhaps on a single genuine invention, and through planned delays in patent issuance, corporations have been able to extend their patent monopolies far beyond the statutory seventeen-year period. Often the exclusive rights in a given invention continue long after the inventor who originally gave them birth has died.[61]

The patent-licensing privilege carries with it the power to place certain restrictions, not always well defined, on the use and sale of patented products or processes. The patent becomes an effective means, even though sometimes a legally questionable one, for dividing international markets, fixing prices, regulating quality, and in short for doing all those things that cartels do. General Electric was not a formal member of the international lamp cartel, but by means of its patent exchange agreements with, and its stockholdings in, the leading foreign lamp companies, it wove its operations in the cartel pattern as effectively as though it were a direct participant.[62] This arrangement protected General Electric's domestic market from the competition of foreign cartel members and the domestic markets of foreign companies from American lamp exports. The cartel affiliates divided "neutral" markets on a quota basis.

*Patent Exchange Agreements Are Numerous*

Imperial Chemical Industries and du Pont have eliminated effective competition between themselves in both their domestic and world markets by their comprehensive patents and processes agreement, supplemented by an active partnership in neutral markets.[63] Through their "marriage contract" of 1929, which was basically a

61. For a number of instances of this kind, and for a discussion of other patent abuses, see Lyon, *et al., op. cit.,* Vol. I, Chap. 6. See also Walton Hamilton, *Patents and Free Enterprise,* TNEC Monograph No. 31, Washington, 1941.

62. The cartel membership of its wholly owned subsidiary, International General Electric, reinforced General Electric's position in the cartel. See *Cartels in Action,* Chap. 8.

63. For a detailed discussion of ICI–du Pont relations, see *Cartels in Action,* Chap. 10.

patents and processes agreement, I. G. Farbenindustrie and Standard Oil Company of New Jersey limited their respective separate fields of operation to chemicals and oil. They agreed to exploit jointly the borderline area between these fields.[64] The titanium cartel was essentially a patent-pooling arrangement designed to eliminate competition in world markets and to protect the vested interest of certain members in the manufacture and sale of substitute pigments.[65]

Such arrangements are not exceptional. Of the fifty-two proceedings instituted by the Department of Justice against international cartels in 1939–1944, thirty-five involved patent exchange agreements.[66] The Kilgore Committee listed sixty-three American companies having patent exchange agreements with I. G. Farbenindustrie alone in 1937.[67]

Opinions differ as to the relative good and evil inherent in such arrangements. While they have generally eliminated or restricted competition, by pooling technological knowledge they presumably have enlarged the aggregate fund of such knowledge available to each of the parties. They have sometimes, but not always, made promptly available to American industry technological advances originating in foreign countries.[68] They have likewise made American technical contributions available to foreign producers. Some students argue that the bad in them is the price that must be paid for the good.[69] This may be true, but it does not preclude a public policy that would greatly diminish the evil and compensate more adequately for the loss of the good.

### *Compulsory Licensing*

A suitable revision of the patent laws of the leading industrial countries would markedly reduce if not entirely eliminate the restrictive influence of patent exchange agreements. Requiring patentees to grant licenses on reasonable terms to any qualified appli-

64. *Ibid.*, Chaps. 3, 11.
65. *Ibid.*, Chap. 11.
66. Kilgore, Report No. 4, Pt. II, pp. 37-60.
67. *Ibid.*, pp. 5-35.
68. Under the patents and processes agreements between I. G. Farbenindustrie and the Aluminum Company of America covering magnesium, IG's patents for producing magnesium, which had made Germany the world's largest magnesium producer, were "put to sleep" in this country until after the outbreak of World War II. See *Cartels in Action*, Chap. 7.
69. Edward S. Mason, *Controlling World Trade*, McGraw-Hill, New York, 1946, p. 53.

cant and forbidding them to impose trade restrictive limitations on a licensee's freedom to use the licensed process or to make and sell the licensed product would have a beneficial effect. Such amendment of the provisions of the International Union for the Protection of Industrial Property (as revised at London, June 2, 1934) would do the job. If political obstacles prevent such drastic revisions internationally, the United States might proceed alone.

Compulsory licensing of patents, even if confined to the United States, would make competition more effective, in both domestic and foreign markets. Unless foreign governments supported cartels through tariffs, import quotas, and similar measures, the United States could, by revising its domestic patent policy, do much to undermine cartels based on exclusive patent rights. Foreign inventors or their employers would then have to decide whether the advantages of protection against unauthorized use of an invention by others in the American market offset the disadvantages of the new statutory restrictions on patentees' privileges.

The question would be: to patent or not to patent in the United States. A decision not to take out an American patent would involve renunciation of any preferential position in exploiting the American market, beyond that of a head start on other producers in the use of the new process or in the manufacture and sale of the novel product. Whether the foreign inventor or patentee decided to exploit the invention by manufacturing abroad and exporting to this country, or to exploit it by establishing a plant in this country, nothing would prevent any American enterprise from adopting the improved technique or introducing the new product. A competitor could do so without let or hindrance of the originator and with no obligation to pay any royalty whatever. As half a loaf is proverbially better than no bread, a decision to patent in the United States would seem assured—despite the suggested curtailment of the patentee's exclusive privileges. In brief, whatever the objections to compulsory licensing, it is a likely means of freeing domestic markets from international cartel controls based on the exchange of technology.[70]

70. What constitutes a sound domestic patent policy for the United States is, of course, debatable. Practically all students of the problem recognize the need for revision of the laws. Compulsory licensing is only one of many suggestions that students of the problem have made and they do not all agree on this issue.

The National Patent Planning Commission, appointed by President Roosevelt in

Compulsory licensing in the United States would not guarantee competitive exploitation of foreign markets, but neither would it prevent American inventors from exploiting their inventions in foreign markets on such terms as foreign governments impose on all inventors, or patentees.[71]

### *Spread of Technology*

Compulsory licensing, however, might tend to drive private industrial research underground. Business concerns anxious to control markets by controlling technology might try to keep the fruits of their research secret. To what extent secret processes would replace patented processes is speculative. In the modern world, however, it is difficult to prevent the spread of scientific and technical knowledge. Thus scientists generally agree that Soviet Russia may independently develop within a few short years techniques for the release of atomic energy, however carefully the United States may guard the secret of the atomic bomb. For private enterprises to keep simpler techniques secret would be harder.

Governments can help expand and improve current technology and make it generally available by promoting industrial and scientific research and fostering exchange of technical information. The trend toward government-directed research in America is evident. From 1930 to 1940, while private expenditures for industrial research in the United States rose from $116 million to $240 million (about 100 per cent), government expenditures for scientific research rose from $24 million to $69 million (slightly less than 200 per cent). If we add to government expenditures those of colleges and universities, public expenditures totalled $100 million in 1940.[72] During the war government expenditures on technical research far surpassed those

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1941, reached the conclusion that "it would not be advantageous to incorporate such a general system [of compulsory licensing] in our patent laws." The Commission recognized, however, the need "of a degree of compulsion in certain fields such as national defense, public health, and public safety." See the report of the National Patent Planning Commission, *The American Patent System*, H.Doc. 239, 78th Cong., 1st sess., Washington, June 18, 1943, p. 3.

71. The International Union for the Protection of Industrial Property binds all signatory countries to make no unjust discrimination between nationals and aliens in regard either to the conditions of patentability or the scope of the patent privileges granted.

72. These are estimates of the Office of Scientific Research and Development. See Vannevar Bush, *Science: The Endless Frontier*, Report of the Director of the Office of Scientific Research and Development to the President, Washington, July 1, 1945, p. 14.

of private industry, running up to $2 billion on atomic fission alone. Now that the war is over, industry may once more catch up, but the government's continuing interest in scientific research and increasingly generous provision for it may be assumed.[73]

At home and abroad, research in agricultural technology has been largely socialized. In Russia the government carries on all industrial research. In Europe generally the drift toward socialism points to an increase in publicly financed technical research. But, paradoxically, socialization of research in the United States with equal access to its fruits might contribute to the vitality of the free-enterprise system. Pooling of research findings in the leading industrial nations would do much to free international trade from the fetters that national patent policies have placed on it.

### *Corporations as Instruments of Control*

A general treaty prohibiting private cartels, even if supplemented by national or international action to curb the more obvious patent abuses, would not be enough to insure free competition in world markets. The modern corporation, free to choose the land of its birth and to bear or adopt an unlimited progeny without assuming the responsibilities of parenthood, plays an outstanding role in fostering cartelization. Corporation finance has become an important instrument of market domination.

The unbridled accumulation of a multiplicity of corporate masks (affiliated or subsidiary companies) for a single business enterprise has made it difficult for the right hand to know what the left is doing—or whose left hand it is. The profligate grant of corporation charters, virtually self-drafted by business, has created such a labyrinthine maze in the corporate structure as to defy public discipline. The corporation has become a means not merely of separating ownership from control, but of concealing beneficial ownership and basic intercorporate relationships.[74] These are sometimes hidden

73. Consult Kilgore, Hearings and various Reports; see especially Monograph No. 5, *Science Legislation,* and Reports Nos. 7 and 8, *National Science Foundation.*

74. The classic study of the perversion of the corporation from its accredited role in modern industry is that of A. A. Berle, Jr., and G. C. Means, *The Modern Corporation and Private Property,* Macmillan, New York, 1933. See also Norman S. Buchanan, *The Economics of Corporate Enterprise,* Holt, New York, 1940; J. C. Bonbright and G. C. Means, *The Holding Company,* McGraw-Hill, New York, 1932; P. M. O'Leary, *Corporate Enterprise in Modern Economic Life,* Harper, New York, 1933; and R. A.

so completely that it is impossible to determine whether intercorporate transactions are carried on at arm's length or represent collusive dealings, economically menacing if not positively illegal in character.

Walton Hamilton has realistically interpreted in its corporate aspects the story of the house-that-Jack-built.

It is not on record that the dominant intent of the Pharaohs was to enlighten international lawyers; but the pyramiding of corporations has today become a fine art. A large mine in Timquay is owned and operated—not by a Timquayan but—by a Delaware corporation, which is "a wholly owned subsidiary" of a Panamanian corporation, which is a wholly owned subsidiary of a French corporation, which is a wholly owned subsidiary of a Nevada corporation, which is a wholly owned subsidiary of a British corporation, which is a wholly owned subsidiary of a Brazilian corporation . . . Nor is the phrase "wholly owned" of any real significance. It can be materially compromised without putting corporate dominions in serious jeopardy. In fact the best legal taste condemns the merging of corporate identities in so crude a way. Said an empire builder, new style, to his legal staff, "Forge these corporate ties in so intricate and circuitous a way that no court in the world can unravel the network." [75]

Unless public authority somehow learns to unravel the network, the modern business corporation will grow into an ever more menacing instrument of market control rather than becoming once more, in accordance with its original design, primarily a device for organizing productive resources. The unravelling process might begin at home, but it would soon lead abroad. Four steps could be taken: (1) federal incorporation for businesses above a specified size engaged in interstate commerce or foreign trade;[76] (2) international cooperation through the United Nations to insure the

Gordon, "Financial Control of Large-Scale Enterprise," *American Economic Review*, March 1939, p. 85.

Many pages of the TNEC Hearings and several of the TNEC Monographs treat of various aspects of this problem. The most significant discussions are in the Hearings, Pts. IV, X, and XXII-XXIV; and in Monograph No. 11, *Bureaucracy and Trusteeship in Large Corporations* (Washington, 1940), and No. 29, *The Distribution of Ownership in the 200 Largest Nonfinancial Corporations* (Washington, 1940).

75. Walton Hamilton, "The Economic Man Affects a National Role," Papers and Proceedings of the Fifty-eighth Annual Meeting of the American Economic Association, *American Economic Review*, May 1946, pp. 740-41.

76. For a "Compilation of Proposals and Views for and Against Federal Incorporation," see Report of the Federal Trade Commission in response to S.Res. 83, 70th Cong., *Utility Corporations*, Pt. 69 A, Washington, 1934. See also *Relative Efficiency of Large, Medium-sized, and Small Business*, TNEC Monograph No. 13, Washington, 1941, especially App. A.

registration and complete disclosure of the ownership and control of, as well as the financial relations among, all corporations engaged directly or indirectly in international trade; (3) an analysis of the significance of the facts thus assembled to the operation of free markets; (4) development of policy appropriate to the facts and their significance.

*Reversal of Trend Toward Nationalism Essential*

To free world markets from private cartel controls is, indeed, a difficult undertaking. Nevertheless, current policy of the State Department is directed toward that goal. A direct attack on cartel arrangements constitutes the most important practical element in an anticartel program. But if free enterprise is to have a chance for survival in world markets, changes in public policy, such as outlined above, must be accompanied by a broader program designed to create a political and economic environment favorable to competition. This sort of program would require a reversal of the drift toward economic nationalism that was so marked in the quarter century between World Wars I and II. Specifically, it would involve a reduction of trade barriers and collaboration among the more important industrial nations on international monetary policies.

Success of an anticartel program—whether undertaken by the United States alone or with United Nations support—depends on a broad program of international collaboration to promote freedom of economic intercourse. It would be folly to suppose that such a program could make much headway unless at least a majority of national governments accept quite literally the precepts of Article IV of the Atlantic Charter as practical principles to guide international economic relations. If the United Nations are to "further the enjoyment by all States, great or small, victor or vanquished, of access, on equal terms, to the trade and to the raw materials of the world," they must reduce tariffs, abandon quotas, discontinue bilateral trade agreements, renounce export subsidies, and reject a host of other devices by which vested interests or favored trading groups pre-empt particular sections of world markets. If these things are to be done, the principal trading countries will have to act together. Governments acting independently might, of course, curb private

cartels somewhat, but failure in the broader program would jeopardize success in the narrower one.

*Collaboration on Monetary and Fiscal Policies*

The trading nations can neither establish free markets nor maintain them if each resorts to nationalistic monetary management and utilizes currency and exchange controls as means of obtaining one-sided trade advantages. Economic warfare cuts two ways. If a free world economy is to be attained, it is essential that governments utilize monetary and fiscal measures to obtain reasonable economic stability and an approach to full employment. They can scarcely achieve these goals through isolated, singlehanded action, however artfully they may individually seek the common end. In dealing with money, unity and certainty are indispensable. The experience of the thirties shows plainly that uncoordinated policies are prone to conflict and that conflicting policies spell frustration and disaster. A free economy cannot survive the rigors of recurring inflation and deflation, with violent changes in the volume of employment and income.

In truth, competition seems best adapted to the environment of an expanding economy such as gave it birth. It both feeds, and feeds upon, expansion. Only in an expansive environment can economic readjustments be made with so little pain that people will tolerate it. In the absence of expansion big business units will look to self-help through collective action and farmers and little businessmen will look to their governments for protection. The syndicalistic NRA program and the collectivistic AAA program were products of the Great Depression and many other countries experimented with similar programs.

World War II brought to the United States a material prosperity not seen in a decade. Since the war an even greater business boom has developed. All this has opened new business opportunities and revived faith in free enterprise. A prolonged depression would shake that faith. When business is easy to get, businessmen are willing to compete for it. When times are hard businessmen, like other classes, seek security. Government, once feared as the regimentor, then becomes government the protector. Prolonged economic contraction once again would lead to an irresistible demand for

collective action to combat the disastrous declines in capital values and personal incomes.[77] An anticartel policy can neither win many friends nor hold many supporters among bankrupt businessmen and unemployed workers.

77. This is not to say that the combination movement of the past fifty to seventy-five years has resulted simply from adversity. Undoubtedly the closing of the frontier, the forging of a nation-wide market, throwing industrial giants in conflict with one another, provided a spur to market controls. But it is instructive that mergers took place in vigorous, extremely profitable industries as well as in those facing a declining demand and shrinking profits, in times of boom (1897–1903, 1922–1928, 1941–1946) as well as in times of depression.

*Chapter 9*

# THE PROBLEM OF RAW MATERIALS

BECAUSE INDUSTRIES differ it is difficult if not impossible to devise a public policy that will apply with equal aptness to all. Experience in every country has, therefore, led to the adaptation of policy to the problems peculiar to particular groups of industries.

Yet no industry is in all respects unique. Every industry uses some productive factors that could be used elsewhere and for other purposes. Every industry, too, looks to the general market for the purchasing power to compensate producers. If it is to work well, its pattern of regulation must be adapted to and integrated with the prevailing system of economic control. These fundamentals hold true no less in "socialistic" Russia than in "capitalistic" America.

In the struggle over economic policy men tend to lose sight of these facts. Some persons, mainly those favoring competition on world markets, become so imbued with the "spirit of enterprise" and so intent on preventing government intervention that they forget the lessons of domestic experience. Free competition works badly and is wasteful in the telephone, telegraph, and railroad industries. Governments practically everywhere have either taken over these public utilities or rigorously regulated them.[1]

1. Yet in diplomatic negotiations on international air transport policy at the Chicago Conference in 1944 representatives of the United States took a stand that apparently ignored all this experience. They insisted on free competition in a field in which theory and practice alike indicate that unrestricted competition is likely to lead to uneconomical and inequitable results. Indeed, American domestic policy rejects free competition in commercial air transport; it assigns specified routes to exclusive franchise holders and regulates in detail their rates and services. Is the likelihood any greater that if international air transport were left to be governed by free competition the results would be satisfactory? See *Bulletin* (Department of State), December 10, 1944, p. 718; and December 31, 1944, p. 843.

Political considerations and administrative difficulties no doubt have influenced American official air transport policy. Because the issues involved in determining or governing international relations (including service connections) among public utility enterprises are so radically different from those involved in the market control of ordinary "goods, wares and merchandise," the present study makes no attempt to survey the problem of public utility cartel arrangements. While the bounds of the public

### *Limitations of Industry-by-Industry Approach*

While some persons forget that industries differ, others forget that however much they may differ they are all vitally interconnected as specialized organs of an economic system. Extremists of this latter kind want a special rule for every branch of trade. They are so preoccupied with the trees that they cannot see the forest.[2] Logically, the industry-by-industry approach to the problem of organizing industrial control rests on the discredited premise usually attributed to laissez faire: preordained harmony. In fact, this approach requires even greater faith in the beneficent ordering of affairs by a Great Artificer than does laissez faire. For with every man a law unto himself, each is still exposed to the restraints of competition; while with every industry a realm apart, apparently only Providence could assure a continuous and harmonious coordination of policies among different sectors of the economy.

If a certain branch of industry requires special stabilization measures to promote balance in the general economy, the distinctive policy developed should be based on principle. The piecemeal approach, springing from expediency, leads only to confusion and a compounding of the problems of interindustry adjustment that are the nub of the difficulty.

### *Economic Characteristics of Raw Material Industries*

Do raw-material-producing industries have, then, any distinctive features in common that could help define the boundaries of this group of industries and indicate special measures for their regulation? Strong forces push for collective regulation of the markets for

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utility category are neither definite nor immutable, as used here they embrace common carriers by sea, air, or land; radio and all kinds of telecommunication systems; and banking and insurance services.

2. Sometimes the advocates of an industry-by-industry approach link this outlook with the doctrine of self-government in industry. See, for example, J. Anton de Haas, *International Cartels in the Post-War World*, National Economic Problems, No. 404, American Enterprise Association, New York, 1944. But not less frequently the same approach is complementary to a philosophy of economic planning and a strong faith in the administrative process. See, for example, Walton H. Hamilton, "The Anti-Trust Laws and the Social Control of Business," in a symposium at Columbia University, *The Federal Anti-Trust Laws*, Commerce Clearing House, Chicago, 1932, pp. 3-21.

Whatever the political bent of its exponents, the syndicalistic policy of treating every industry as unique obviously neglects the interstitial elements and forces in the economic system.

primary commodities. Farming and mining are not only subject to the cyclical ups and downs of other industries but they are unstable for special reasons of their own. Agricultural income fluctuates more erratically than national income. National income produced declined 51 per cent from 1929 to 1932, agricultural income 66.6 per cent.[3] By 1937 agricultural income had recovered nearly three quarters of the ground lost in the depression, while national income had recovered less than three fifths of its setback. In fact, with government benefit payments, the total 1937 income of farmers was greater than in predepression years. Under the impetus of war demands, with rising prices and a 25 per cent increase in output, the cash income from farm products marketed more than doubled. Although the wheel had come full circle and in agriculture feast had replaced famine, the government continued to distribute benefit payments, adding affluence to plenty.[4] This was the penalty society paid for

3. *Statistical Abstract of the United States, 1937,* Department of Commerce, Washington, 1938, p. 297. See also Karl Brandt, *The Reconstruction of World Agriculture,* Norton, New York, 1943, pp. 90 ff.; Theodore W. Schultz, *Agriculture in an Unstable Economy,* McGraw-Hill, New York, 1945, Chap. 2; and *Farm Income Situation,* Bureau of Agricultural Economics, December 1944. These are the sources for much of the factual material in the following pages.

4. Agricultural economists seldom see the situation in this light. Farm income is in their view "chronically deficient." See Theodore W. Schultz, *Redirecting Farm Policy,* Macmillan, New York, 1943, Chap. 1, and *idem, Agriculture in an Unstable Economy,* p. 43 and Pt. III.

No one will dispute that steadily rising incomes and living standards for farmers would be desirable, not only in America but in Asia, Europe, and everywhere else. Everyone would agree also that higher incomes and living standards are desirable for industrial and commercial workers. Indeed, in one sense all incomes are deficient; we would be better off with more.

But the difficulty is to divide the limited social (aggregate) income in accordance with economic realities and ethical ideals. Evidence does not indicate that farm incomes have been too low all along as compared with those in other competitive industries, or that the decline in agriculture's share of the national income has been undue or inequitable. The yield on farm capital appears to have been comparatively high but risks in this field have also been relatively high. One may doubt that farmers on the whole suffered more privations and endured greater distress during the Great Depression than urban residents.

While those who believe that farming is a sick industry often demand "equality for agriculture," they are far from clear on what would constitute equality. One device frequently used to show how far agriculture is from getting its economic deserts is a comparison of per capita annual earnings of persons engaged in agriculture with average annual wage income of employed industrial workers. See for example, Schultz, *Agriculture in an Unstable Economy,* Chaps. 4, 5. But the comparison is wholly inadmissible, at least for the purpose plainly implied. Among the many factors that discredit a direct comparison of this sort, it will suffice to mention a single one. The group, "persons engaged in agriculture," among whom farm income is divided to determine per capita income comprises all members of farm families who in response to census questionnaires report that they "work on the farm." Unquestionably the census enumeration embraces many farmers' wives, along with children and old persons, the proportion of whose waking hours devoted to actual crop and livestock husbandry is,

basing agricultural relief on politics instead of principle. But it is equally true that the disruption and desolation of farm life in the early thirties was the penalty agriculture paid for society's failure to take adequate account of distinctive conditions in this field in shaping its general economic policy.

Available statistics indicate even sharper income fluctuations in mining than in agriculture. Indeed, in the United States the relative decline in income from 1929 to 1932 was greater in mining than in any other major industry. Mining income at the bottom of the depression was only 26.7 per cent of 1929.[5] In the next five years it rose over 300 per cent. It dropped from 2.2 per cent of national income in 1929 to 1.1 per cent in 1932 but was back at 2.1 per cent in 1937.[6]

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to say the least, a matter of guesswork. On the other hand, not only are involuntarily unemployed wage earners excluded from the group among whom wage income is divided to determine per capita industrial income, but dependent members of employed wage earners' families are also left out of account.

The simple fact is that the conditions of agricultural production and of manufacture differ so radically and in so many ways that no direct comparison of earnings rates is practicable—or legitimate. This is not to deny that many cultivators of the soil are ill paid, in particular southern share-croppers, Chinese coolies, and Indian peasants. But so are many factory workers, miners, stevedores, cleaners and pressers. They earn little and live wretchedly. Equality *with* agriculture would be at least as fitting a slogan for some urban classes as equality *for* agriculture is for some farm classes. But no one has yet presented persuasive evidence that, taken as a whole, agricultural earnings were in 1945 "still far out of line" (*ibid.,* p. 97). On the contrary, the doubling of farm prices and the trebling of per capita farm income during the war years, 1940–1945, in so far as they are not merely reflections of temporary structural distortions in the national economy attending industrial mobilization and war-created dislocations in world agricultural markets, point to a deficit rather than an excess of labor in agriculture.

However, this does not mean that even today the average rate of return on resources employed in agriculture is as high as that realized in certain fields of manufacture. Doubtless the position of agriculture is still "unequal" when compared to that of a number of manufacturing industries where monopoly has restricted investment and employment and raised the average returns above a competitive level. Moreover, many of these monopolized branches of manufacture are suppliers of products consumed on farms. Even with government "benefit" payments, farmers selling in free markets probably realize an income from labor and capital less than that which many businessmen obtain in industries that rely on farm purchasing power for a market. In this sense, "inequality for agriculture" may persist, even though farm income may be adequate, or more than adequate, from the standpoint of competitive equilibrium. But surely the solution of the farm problem does not lie in cartelizing agriculture so as to match the monopolistic restrictions a Big Business regime may impose on manufacturing industries. The way for an economy to escape strangulation is not to increase the pressure on its throat.

5. See *Income in the United States, 1929–1937,* Department of Commerce, Washington, 1938, p. 17.

6. *Ibid.* Simon Kuznets (*National Income and Its Composition, 1919–1938,* National Bureau of Economic Research, New York, 1941, p. 164) gives substantially identical estimates of the proportions for these years. He also provides statistical measures (pp. 191-210) of the conformity of income fluctuations in various major branches of industry to the general cyclical pattern. These measures confirm the conclusion that mineral industries are exceptionally erratic providers of income.

*Mines Operate Spasmodically*

In contrast with agricultural fluctuations, rooted mainly in price movements,[7] the main source of unsteadiness in mining incomes is changes in mineral output. World production of nonagricultural primary products decreased from 1929 to 1932 by more than 30 per cent and then increased in the next five years by 75 per cent, while agricultural output remained practically constant during the depression and increased less than 10 per cent during the recovery.[8] The greatest changes occurred in world metal production: a decrease of 55 per cent from 1929 to 1932 and an increase of 165 per cent from 1932 to 1937.[9] Mineral industries in the United States experienced similar ups and downs. From 1929 to 1932 domestic production of all minerals declined 40 per cent, of metals 70 per cent; in the next five years production of all minerals rebounded 66 per cent, of metals 235 per cent.[10] Prices of mineral products show no

7. As the late John Maynard Keynes observed, the frequency and range of agricultural price swings are "quite staggering." See his article, "The Policy of Government Storage of Foodstuffs and Raw Materials," *Economic Journal,* September 1939, p. 449. Keynes cited (p. 450) several examples. He found that in the ten years 1928–1937 the average excess of the annual high over the annual low of rubber prices was 96 per cent and the year's high was only once less than 70 per cent above the year's low. For wheat prices, the average excess of the annual high over the annual low was 70 per cent and only once was it less than 47 per cent. For cotton prices, the average excess of the annual high over the annual low was 42 per cent and only twice was it less than 33 per cent.

The Report of the Delegation on Economic Depressions, *The Transition From War to Peace Economy* (League of Nations, Geneva, 1943, Pt. I, pp. 23-24), cited additional evidence of the mercurial character of agricultural prices. "During the last twenty years, the price of wheat and of jute has been halved three times within about twelve months, the price of cotton three times in periods of under eighteen months . . . On one occasion the price of coffee was halved in eight months, on another the price of sugar trebled in four months." The Report also cited examples of price fluctuations in mineral raw materials; but except for one or two metals—in particular copper—price changes in this field were not so sharp as those among basic agricultural commodities. Unquestionably the most spectacular price gyrations have been those in rubber, sugar, coffee, and wheat.

8. See *Economic Stability in the Post-War World,* Report of the Delegation on Economic Depressions, Pt. II, League of Nations, Geneva, 1945, pp. 76-77.

9. *Ibid.* The output of mineral fuels, the other major component of nonagricultural primary products, fluctuates much less than that of metals because the demand for coal and oil is relatively steady. Their main uses are in the transportation and power industries and in domestic heating and cooking. On the other hand, consumption of metals depends chiefly on manufacturing activity. Cf. Harold Barger and Sam H. Schurr, *The Mining Industries, 1899–1939,* National Bureau of Economic Research, New York, 1944, pp. 17-18.

10. *Ibid.,* pp. 343-44. These figures correspond fairly closely with the estimates given in an earlier study, under WPA auspices. See V. E. Spencer, *Production, Employment, and Productivity in Mineral Extractive Industries, 1880–1938,* National Research Project on Employment Opportunities, Report S-2, Works Progress Administration, Philadelphia, 1940, pp. 9, 21.

such volatility as farm product prices, though for special reasons prices of some minerals, notably copper and petroleum, are extremely erratic.[11] But the wide fluctuations in mineral output furnish the key to the instability of mining incomes. The proverbial prince-and-pauper reputation of the mineral industries is well earned.

In view of the marked difference in the nature of the instability of these two sections of the raw material industries—price gyrations in agriculture, output variations in mining—factors other than their common dependence on natural resources must account for their instability.

### *Role of Demand in Farm Product Pricing*

Demand for agricultural products changes little as prices change. As economists say, it is "inelastic." Especially is this true of food. Demand for a particular food product, however, like wheat or beef, responds to price changes more sensitively than does the demand for food products in general. Consumers may substitute pork or fish for beef and rice or potatoes for wheat when beef or wheat prices go up. But even for specific foods the amount consumers will buy is not greatly affected by the price, for dietary habits are rigid. Staple food products in particular resist substitution; nor does their consumption expand much when prices drop by as much as 50 per cent. Few families buy more milk, for example, when its price is low, or less when its price is high.

Moreover, in industrial societies at least, per capita expenditures on food appear to be levelling off over the long run. This indicates that when productivity and living standards reach a certain level people generally will spend a larger part of their incomes for comforts and conveniences, or for recreation, travel, and education. With higher incomes, once a certain level is reached, men do not

11. In the United States during the deflation from 1929 to 1932, while the composite prices (on a 1926 base) of farm products fell from 104.9 to 48.2, prices of fuels declined only 14 per cent and of metals barely 20 per cent. See *Statistical Abstract of the United States, 1937,* p. 300.

Copper prices have fluctuated rapidly and widely chiefly because of intermittent cartel controls, rather than because of any peculiarities of supply and demand. See discussion in Chapter 5. The violent oscillations of petroleum prices are connected with the exceptionally speculative nature of oil discovery and recovery.

But the great majority of mineral prices, including coal and iron as well as nonferrous metals, are much steadier than agricultural prices. Notable examples of price stability among mineral raw materials are aluminum, sulphur, nickel, and molybdenum. The basic explanation of price stability in these fields is monopolistic control of supply.

eat more—though they may have a more varied diet, and perhaps drink more![12] Instead they cultivate supplementary tastes. Or, instead of broadening the range of their consumption, they may save more.

This is true of the average consumer in modern industrial societies. Even in America, the most advanced industrial nation, however, low-income groups probably continue to spend on food the same percentage of their incomes as wages go up. Nevertheless, farmers tend to get a smaller slice of the average consumer dollar as living standards continue to rise. Though the income inelasticity of the demand for farm products is chiefly significant as affecting the long-run course of agricultural markets, it helps explain the cyclical and seasonal gyrations of prices in this field.

### *Role of Supply in Farm Product Pricing*

Supplies of farm products also respond sluggishly to changes in price incentives. This is partly because farming is more than a business; it is a way of life. To abandon farming is like renouncing one's native citizenship. A man does not ordinarily make such a move hastily; the heart no less than the head shares in the decision.

Moreover, despite a fall in its price, a farmer may keep on producing a particular crop in about the same volume because of the benefits of crop rotation or because he lacks the facilities and technical knowledge for raising other crops. A stockman would seldom make a good farmer even if crops would grow on the grazing range. Soils, climate, and agricultural skills are more specialized than many nonfarmers appreciate. The climate of Tanganyika is well adapted to sisal culture, but not to other marketable crops.

In many agricultural lines farmers cannot promptly increase production, because, even if good land is available, it takes time for the plants and animals to mature. Rubber and apple trees, for ex-

12. Economists call this principle the income inelasticity of demand for food. It rests on the simple, commonsense observation that even the most voracious appetite has its limits, and that most persons will spend money for other things long before they are gorged, or broke.

The income elasticity of demand for certain food products may be high, of course, even when it is low for food in general. For example, the demand for citrus fruits may increase as income rises, except in the upper brackets. Moreover, in general, the income elasticity of demand for food of all kinds appears to be high among low-income groups.

ample, begin to yield only five or six years after planting. The biological rate of reproduction of herds limits the increase of wool, fur, and meat supplies. And once a husbandman has built up his capital he is unlikely to reduce it promptly when prices turn down. Rather, he will tenaciously hold on, hoping for better days.

In agriculture more than in any other branch of industry conditions beyond the producers' control affect the rate of output. The weather influences the size of the crop, regardless of the state of the market. Indeed, the weather often upsets the efforts of farmers to adjust output to market demands.

Though none of the factors affecting farm markets is peculiar to them, the conditions of supply and demand for agricultural products make prices a poor regulator of their production and consumption. The instability of farm prices exposes consumers to budgeting difficulties, to recurrent squeezes and windfalls, but it exposes farmers to far greater risks.[13] Violent fluctuations in farm incomes make for economic insecurity among a large part of the population even in highly industrialized nations. The uneven fortunes of farmers contribute to instability in other parts of the economy, accentuating the unpredictable changes in the flow of consumer purchasing power that make business a gamble.

### *Nature of Demand for Mineral Products*

The first purchasers of most mineral products, whether fuels, metals, or other raw materials, are industrial fabricators. As manufacturing activity quickens or slackens, so does the demand for the output of mines, wells, dredges, pits, and quarries. However, manufacturers adjust their output primarily on the basis of changes, not in the prices of raw materials, but in the volume of orders for finished goods. With a strong demand, they will buy raw materials

13. The discussion here refers primarily to that part of agriculture which is geared to an exchange economy. Subsistence farming as carried on in large parts of Asia, Africa, and South America is outside the compass of this survey. No small part of the productive activities on the diversified, family-size farms widely distributed in the United States is of a self-supporting kind, essentially divorced from the market. Agricultural economists are prone to overlook the significance of this surviving remnant of subsistence farming as a factor obstructing occupational shifts, and to underrate its contribution to farm income. They make a sharper division between subsistence farming and agricultural production for national and world markets than the facts warrant. Cf. Paul Lamartine Yates, *Commodity Control: A Study of Primary Products*, Fabian Society, London, 1943, Chap. 1, and Brandt, *op. cit.*, pp. 150, 334, and *passim.*

in spite of high prices; with a weak demand, even exceptionally low prices will not induce them to tie up much working capital in raw materials.[14]

The unresponsiveness of demand for mineral products to changes in their prices rests partly on other factors. Manufacturers cannot always find a good substitute for a particular raw material. If the price of coal goes up, industrial consumers will not straightaway buy less. The manufacturer using coal-burning equipment ordinarily cannot afford to convert to oil-burning equipment or central-station electric power simply because of a 20 per cent rise in coal prices.[15] Copper wire, tungsten filament, and aluminum cable may each be so superior for certain uses that, within an ordinary price range, no change in their relative prices would induce electrical manufacturers in the short run to change their rates of consumption. In the long run, the relative prices of various raw materials will weigh heavily with manufacturers in deciding which ones they can most profitably use and hence in determining the relative amounts produced and used.[16]

### *Special Characteristics of Minerals Supply*

Three features of mining distinguish it from almost every other branch of production. First, most minerals occur underground and no producer knows precisely the quantity or the quality either of his own deposits or of the industry's potential sources of supply. Second, minerals are exhaustible; whatever is taken out cannot be replaced. Third, geological conditions necessarily localize mining without re-

14. Though manufacturers' inventory accumulation or depletion may occur in response, respectively, to falling or rising prices of raw materials, the development is quite as likely to be the other way around. Manufacturers frequently take falling raw materials prices as a signal for both a decline in product prices, and a further decline in raw materials prices themselves. Hence they scale down their inventories. Rising raw materials prices tend to induce the opposite reaction, stimulating rather than retarding the demand.

15. Unless, of course, the specific price increase is one of a series which the manufacturer anticipates may continue while he foresees no comparable rise in oil prices or the cost of purchased power.

16. Research and the growth in knowledge of the composition and properties of materials have substantially widened the range of their potential substitutability. To the extent that this has occurred, inelasticity of demand for specific raw materials has tended to diminish. But inelasticity of demand has not disappeared. Plastics may displace glass or metal doorknobs, glass may displace asbestos or brick, but familiar materials are still superior in many basic applications. Zinc still leads as a corrosion resistant; steel has no near competitor as a basic, heavy-duty structural material; glass is virtually unchallenged wherever transparency and rigidity are required.

gard to the distribution of population, capital, industrial capacity, or national power.

Minerals, being hidden, must be discovered before they can be extracted. Because operators have already incurred, directly or indirectly, heavy costs in prospecting and development, in the face of a constant risk of new discoveries of richer or more accessible deposits they have slight inducement to husband their proven reserves. To stop production in time of glut is ordinarily prudent, but if, as in the extraction of minerals, the future is a pure gamble it may be imprudent, even irrational. The threat of continuing glut may outweigh the promise of returning scarcity. In mining it frequently does. The risks of deferring recovery are especially great for minerals subject to drainage, such as petroleum, natural gas, and certain mineral salts. On the other hand, a short-term increase of supply in response to price increases can take place only within the limits set by proven reserves.

The exhaustibility of mineral resources furnishes a strong incentive to their monopolization. Pre-emption and unified control of irreplaceable mineral deposits permit regulation of the rate of depletion by the principle of maximum returns for the owners. But this does not mean that the rate of depletion is controlled in the interests of society. Just as the speculative element of discovery and recovery makes for wasteful haste in using minerals up, so their exhaustibility is an open invitation to wasteful restriction of their use.

Though all mineral production involves a gamble on nature's bounty, the risks are greater in some lines than in others. New discoveries may make the scarce resources of today superabundant tomorrow. An unexpected decline in reserves—mineral reserves are always estimates—may make a raw material that is plentiful and cheap today extremely scarce tomorrow. Similarly, though every ton of any natural resource taken out of the earth brings society's stock of that material so much nearer exhaustion, the current stage of depletion differs greatly from one mineral industry to another.

The markets for different minerals reflect these differences. In some mineral industries rates of production tend to be so great that prices do not cover costs, in others so low that prices more than cover costs. Bituminous coal and common salt are examples of the

first; tin, nickel, aluminum, asbestos, mica, sulphur, and diamonds illustrate the second situation. In other mineral industries—such as petroleum, copper, and phosphates—output rates may alternately exceed and fall below those which would be economical. For few minerals does price alone furnish a reliable and satisfactory regulator of production. Mineral markets are, in general, bad markets. They are often out of balance.

### *Remoteness of Minerals From Markets*

Mining regions are often remote from population centers. The isolation of mining communities, and in particular their frequent separation by political boundaries from the chief centers of consumption, adds to the difficulties of adjusting supply and demand.

Moreover, the geographical pattern of production in the mineral industries may have prime political significance. Many minerals, indeed most, are strategic military materials.[17] Access to foreign sources of supply may be a condition of national survival in wartime. Hence the exceptionally insistent wartime demands. But military strength in war depends heavily nowadays on industrial strength in peace. Industries essential to national defense cannot be built up overnight. Indirectly, thus, the public has an interest in assuring the survival of domestic industrial consumers—who ordinarily use these strategic materials for civilian purposes. Continuity and adequacy of supplies of such materials are of special concern to consumers, therefore, from the standpoint of both national and industrial security. But as civilian demand is ordinarily less urgent and the requirements are smaller than the wartime military demand, capacity tends to exceed peacetime output in these industries. This inconstancy of demand does not make for smooth marketing.

At the same time, the isolation of mining communities makes them unusually vulnerable to market disturbances. Copper miners in the Belgian Congo, the Chilean Andes, or even in Butte, Montana, have few alternative jobs to which they can turn during a slack period. Coal miners in West Virginia, Wales, and Silesia, and oil roustabouts in Venezuela, Bahrein, and New Mexico, know from ex-

17. Military authorities define a strategic material for any given country as one essential for armament production and of which the only adequate source of supply lies outside its jurisdiction.

perience that to be laid off their regular jobs means enforced idleness. When the terms of trade move unfavorably for a country that lives mainly by exporting a single mineral, political turmoil and international tensions often follow.

### *Scrap as a Competitor of Virgin Metals*

A large sector of the mineral industries—metals production—has a fourth distinctive characteristic. Most metals do not disappear from the market for good after they are fabricated into finished products and enter consumption channels. That is, they are not, in fact, "consumed." The finished products ordinarily lose their utility or become obsolete long before all the metal parts are worn out, so that these parts re-enter the market time after time as scrap. Some secondary metals are not inferior to virgin metals; others can be used to advantage only with a certain amount of newly won metal, or for limited purposes. But in either case, the effect of scrap supplies on the market for the primary metal is similar to that of an accumulation of above-ground reserve stocks. To the extent that buyers, for example foundries, have access to scrap piles and can advantageously substitute scrap metal for virgin metal, they demand less of the virgin metal. The strong tendency for scrap supplies (of all metals, but especially of nonferrous metals) to increase decade after decade offsets, and sometimes more than offsets, the tendency of primary metals to become increasingly scarce because of depletion of known deposits. More obvious than this long-run tendency, however, is the influence of scrap metal supplies in drastically curtailing the demand for primary metals during prolonged periods of business depression.

### *Implications of Characteristics of Raw Material Industries*

Left to themselves, agricultural and mineral industries are peculiarly subject to periodic maladjustments of supply and demand and singularly incapable of correcting such maladjustments promptly. The equilibrating forces of the market work sluggishly in these fields, and yet devastatingly.

But the imperfections of the market that disturb the agricultural group of raw material industries differ from those that bedevil the

extractive group.[18] Indeed, the defects of agricultural markets are the opposite of the defects of mineral markets. The competitive interests of thousands of small-scale farmers—each employing his own techniques to cultivate a tract of land that differs from every other in location, soil qualities, drainage, and so forth, and all subject to the vagaries of the weather—make impossible a flexible adjustment of supply to demand such as a free market presupposes. On the other hand, in mining, monopolistic tendencies, springing from the speculative nature of prospecting, the exhaustibility of proven deposits, and the heavy, specialized, long-term investments required, interfere with the steady economical utilization of resources in this field.

The agricultural and the mineral groups of raw material industries plainly require different kinds of regulation. In a nutshell, the problem in agriculture is how to hold in check an expansion of supplies of particular products in response to the stimulus of occasional bad-weather shortages, technological advances, or changes in demand —so that the adjustment will not overshoot the mark. A variant of this perennial problem is how to reduce the output of certain agricultural products when production has expanded in response to war demands.[19] In the main, the problem in the mineral industries is how to insure production at a rate which is economical and at the same time in accord with conservation standards.[20]

18. Also, their thrust may differ from period to period in the same industry, leading alternately to glut and to shortage. See text following.

19. Sometimes military demands lead to a general increase in the volume of production of a primary material. This happened during World War II in the case of wool, and still more spectacularly in that of aluminum. More often among agricultural products, perhaps, the wartime growth of output in some regions was an offset to reduced production elsewhere. Sugar provides an illustration. But as the experience of this industry after World War I demonstrated, the withdrawal from the market of some of the customary sources of supply is likely to be temporary. Yet those producers who profit from war-created shortages are prone to forget the contingency on which their temporary opulence rests. See *Cartels in Action,* Chap. 2.

20. The gist of conservation is the avoidance of waste by balancing the results of present against future use of resources. The gist of economy is the avoidance of waste by balancing the advantages of production of various possible goods and so using available productive resources as to maximize their yield, or product.

Some advocates of conservation think of it as simply saving (present nonuse of) resources for future use. But economy requires the present use of available resources up to the limit at which the prospective urgency of demand outweighs the actual current need. It is wasteful to refrain from using a resource, when it could meet a pressing demand, in order to have a larger reserve for future use, if present indications point to a less urgent demand in the future because of new discoveries or technological changes that may make it obsolete. It would have been wasteful not to have slaughtered the whale herds in the mid-nineteenth century, at a time when fats and oils were in

*Elements of an International Agricultural Policy*

A sound program for stabilizing farm incomes requires a clear conception of the problem and a clear definition of the objective. True agricultural stabilization, whether by means of commodity agreements or otherwise, does not aim at guaranteeing farmers a fixed and unvarying price for every crop. Nor does it seek to

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short supply, in order to "conserve" this resource for future generations which, as the event proved, had little use for whale oil once Colonel Drake, Coal Oil Johnny, and their accessories and successors had shown men how to get and use petroleum. Of course, it is also wasteful to use up a resource when *it* satisfies *only a trivial* want, *if* by reserving it for future use it may yield a greater satisfaction. It was certainly wasteful to strip Michigan's forests of white pine and hardwood for fence posts, shipping crates, and railway ties, when reasonable foresight would have taken account of the contribution these timber resources might have made, in the form of better furniture and better homes, to the comfort of future generations.

Undoubtedly, as these examples show, conservation—like economy, of which it is a special case—involves value judgments as well as speculation. What may look like waste to one person may look like conservation to another. And to the same person, what may appear wasteful today may appear prudent husbandry tomorrow. But this does not absolve one generation from the responsibility to its descendants to use the national patrimony so as to hand on to them a reasonably adequate basis for their livelihood and welfare. Conservation calls for judgment, true; and in judgment men will sometimes disagree and sometimes err. But this excuses no one, and especially it excuses no generation in its exploitation of a nation's resources, from using the best judgment at hand.

In practice, if no public controls are set up, one kind of waste, that resulting from undervaluation of specific present needs, is quite as likely to occur as the other kind, that resulting from undervaluation of future needs—in disregard of the principle of conservation. The most common case of undervaluation of current needs is that involved in a monopolistic strategy which permits satisfaction of only that part of present demand that is urgent enough to pay a monopoly revenue over and above the price that would indemnify the producer for actual unit cost of production. A monopoly, by restricting supply, may save up a particular natural resource for use in the future and, in this sense, practice "conservation." But excessive conservation is as wasteful—as uneconomical—as deficient conservation.

Undervaluation of future needs, from the social point of view, is a more familiar type of resource waste, though it is questionable whether it occurs more frequently than that discussed above. An interest rate of, say, 5 per cent makes returns beyond twenty years in future almost valueless. Therefore private enterprises exploiting natural resources are, in effect, precluded from giving much weight to prospective yields from deferred use of resources beyond, say, one generation hence. But a community, or nation, has an indefinite prospect of life, and its survival may depend on its prudent forethought in assuring itself adequate supplies of certain resources in the distant future. In providing such reserves for oncoming generations it would be folly for society to limit its commitments or "investment" to transactions which promise "profit" on the basis of the current market rate of interest.

For a fuller discussion of this comparatively neglected but important subject, see H. A. Innis, "The Economics of Conservation," *Geographical Review*, January 1938, p. 137; S. von Ciriacy Wantrup, "Economic Aspects of Land Conservation," *Journal of Farm Economics*, May 1938, p. 462; and *idem*, "Resource Conservation and Economic Stability," *Quarterly Journal of Economics*, May 1946, p. 412. See also Myron W. Watkins, *Oil: Stabilization or Conservation?*, Harper, New York, 1937, Chap. 4; and *idem*, "Scarce Raw Materials," *American Economic Review*, June 1944, pp. 228-60, particularly pp. 237, 242-43.

guarantee them the same average price for all farm products year after year. Nor is farm price parity synonymous with genuine agricultural stabilization.[21] To try to maintain, decade after decade, the relation between farm prices and nonfarm prices that obtained in a selected base period, say 1910–1914, is to flout economic sanity—a King Canute venture in futility.

Restrictive international commodity agreements, instead of helping agriculture, would hurt it. In truth, all "stabilization" policies that aim at preserving a consecrated status quo ignore vital factors in an economical adjustment of agriculture's position in a dynamic economy.[22] They ignore changes in the relative growth of population and of wealth, both nationally and internationally. They ignore changes in the age composition of populations and in the geographic distribution of industry.[23] They ignore subtle changes in human tastes, habits, and living standards. But above all they ignore the

21. On the farm price parity formula, cf. Schultz, *Redirecting Farm Policy*, pp. 11-19, and *idem*, *Agriculture in an Unstable Economy*, pp. 18 ff.

22. That is to say, in any actual or prospective economy. A static, or mature, economy is a figment of the imagination, proper enough for theoretical inquiry, but quite out of place as a basis for formulating policy. Cf. George Terborgh, *The Bogey of Economic Maturity*, Machinery and Allied Products Institute, Chicago, 1945.

Curiously, some agricultural economists find the primary source of the alleged chronic depression of farming in the dynamic quality of the modern economy, while at the same time they look to an acceleration of the pace of economic advance as the chief remedy. For example, T. W. Schultz in *Agriculture in an Unstable Economy* says (p. 45): "A developing economy places strains and stresses" upon what he calls "the equilibrating mechanism." Eight pages later, without ado, he switches from this viewpoint, which reflects the classical tradition, to the Keynesian viewpoint. On p. 53 he declares: "A rate of increase in income as high as 4 per cent per year . . . would be a powerful force in bringing about the essentials of a moving equilibrium between agricultural and non-agricultural fields of economic activity."

23. That Great Britain has become since the beginning of the nineteenth century primarily a manufacturing country and looks overseas for the bulk of its food and raw materials does not of itself connote "depression" either of British agriculture or of agriculture overseas. When a British research group speaks of "the pitiable state to which primary producers have . . . been reduced [by] the continuous downward trend in [their] prices relative to those obtaining for manufactures," it neglects both (1) technological advances in agriculture and transport, and (2) refinements and improvements in specific manufactured products as well as changes in the composition of that generic class of products. It may be true, as averred, that "In 1938 it had become possible for Britain to pay for a unit volume of her imports with 30 per cent less of exports than in 1913." But the inference expressly drawn from this, that the terms of trade had "moved unfavorably" for primary-products-exporting countries, will not stand examination. For as manufactured goods become more elaborate, more refined, of higher quality, the volume of manufactures required to pay for a given volume of raw materials declines, other things being equal. See "Economic Problems in a Period of Transition: International Commodity Controls, II," *Review of International Co-operation*, January 1945, p. 14. Of course, the real terms of trade might have changed to the disadvantage of raw-material-exporting countries temporarily as a result of world depression, or more permanently as a result of cartel and other restrictions on trade.

relative pace of technological advance in the agricultural and other sectors of the economy.[24]

An economy is clearly headed for trouble if it freezes either specific agricultural prices or farm income, whether it freezes them at their absolute levels in a given period or at their ratios to nonfarm prices or income in some "normal" period. As architects long ago discovered, a rigid structure will not withstand strong winds or earth tremors so well as a more resilient one. An economic structure that cannot withstand the shocks of technological and social changes is headed for the discard.

### *Advancing Farm Technology Intensifies the Difficulties*

The real problem of agricultural stabilization is not how to resist radical technological advances, unusual climatic conditions, and long-run changes in consumer demands. It is how to adjust farm production to these developments with reasonable facility and dispatch. The problem has become more acute in recent years because of the rapid advances in farm technology. Research in plant and animal breeding, in the chemistry of soils, in the control of pests, and in related fields, all carried on at public expense and made available without cost to farmers, has begun to bear fruit.[25] It has profoundly altered the relative crop-yielding and income-yielding potentialities of different regions. It has led to revaluation of traditional crop cycles and of the economic advantages under different conditions of both specialization and diversification.

Nor has agriculture benefited only from publicly financed scien-

24. That the United States in the course of the past century has become increasingly a manufacturing country, so that its rural population has shrunk from 80 to 20 per cent of the total, does not of itself indicate agricultural stagnation, either at home or abroad. If, as T. W. Schultz alleges (*Agriculture in an Unstable Economy,* pp. 62-65), a secular decline in the proportion of *per capita* national income expended on farm products has accompanied this transformation, it is only what reason would lead one to expect. If our economy had to devote as large a part of its per capita resources to food and fiber production as a century ago, how could urban dwellers have increased from 20 to 80 per cent of the whole population? How, indeed, could these nonfarmers subsist? Improvements in agricultural and transport technology are plainly the key to the growing "cheapness" of farm products—not a subtle process of exploitation of farmers by a market institution, which may be imperfect but which is not that "vicious." See Leo Rogin, *The Introduction of Farm Machinery,* University of California Press, Berkeley, 1931.

25. For a concise summary of these developments and comment on their significance, see testimony of Henry A. Wallace, formerly Secretary of Agriculture, in *Scientific and Technical Mobilization,* Subcommittee of the Committee on Military Affairs, U.S. Senate, 78th Cong., 1st sess., Hearings pursuant to S. 702 and S.Res. 107, October 14, 1943, Pt. V, pp. 703-11.

tific research. The introduction of the automobile and the tractor, as well as agricultural implements like the combine, has also helped reduce labor costs per unit of farm output.[26] These advances in agronomic science and farm technology have wrought a veritable agricultural revolution within a generation. They have, for example, transformed rice culture in the lower Mississippi Valley from a puny industry which even with tariff protection supplied less than half the domestic requirements into a giant with a large exportable surplus. From the late thirties to the middle forties, they increased the domestic production of soybeans threefold, thereby greatly easing the wartime vegetable oil shortage. They trebled the acreage yield of far eastern rubber plantations through the introduction of bud-grafted stock, and thus helped keep the price of this essential material from skyrocketing.[27]

These and other, hardly less striking developments have riddled the classical thesis that made nineteenth-century economics "the dismal science." The march of events has dispelled the fears which uncritical reading of Malthus and Ricardo aroused. War shortages apart, science and technology have largely eliminated anxiety, in the Western world at least, about "diminishing returns in agriculture" and "the pressure of population on food supplies."

Agriculture, it is true, has assumed a special place in the modern economy. But it is not that foreseen by the classical economists, with landowners becoming the privileged beneficiaries of differential monopoly revenues under the "inexorable" law of rent. Instead, agriculture has become society's porter, as it were, bearing on its broad back the increasing bounty that crafty Science has extracted from indifferent Nature. In these circumstances, plainly the proper objective of agricultural policy is not to block technological progress and stifle production by cartel agreements. Rather it is to assure society the fruits of a steadily improving farm technology while relieving the millions of small-scale farmers of fortuitous losses from the special risks of a sprawling, undisciplined industry.

26. Even since 1940, despite the shortage of materials, the number of farm tractors in use in the United States has increased 34 per cent. See *New York Times,* June 26, 1946.

27. See, on bud grafting, *Cartels in Action,* p. 73; on soybean and rice culture, Schultz, *Agriculture in an Unstable Economy,* pp. 17, 152. On the potentialities of continuing increase in yields per acre, simply through wider use of known techniques, see Kirtley F. Mather, *Enough and to Spare,* Harper, New York, 1944, pp. 66-67.

*Record of International Primary Commodity Controls*

International action to stabilize agriculture has taken the form, predominantly, of so-called commodity agreements.[28] For the most part, these are government-sponsored programs to regulate supplies of farm products, usually applying primarily to exports but sometimes applying also to production or imports.[29] With few exceptions, they have grown out of previous experiments by producers organized on a voluntary basis to limit supplies and raise prices. They reflect their origin.

The characteristic feature of these prewar international commodity agreements is governmental implementation of a restrictive trade policy. They impose mutual restraints on specified raw material exports from the major producing countries, and directly or indirectly therefore on the output of individual producers. The strategy is to raise the prices of these materials in world markets by more than enough to offset the reduced volume of goods exported. Commodity agreements as heretofore developed include no measures for expanding consumption, reducing costs, or shifting productive resources into alternative lines of employment.

Intergovernmental commodity agreements are, in fact, a species of cartel. Restriction of output requires some basic standard for allocating quotas among the members. In practice, they have followed

28. For a list of the conventions adopted up to 1943, see *Intergovernmental Commodity Control Agreements*, International Labor Office, Montreal, 1943. In this comprehensive collection of documents on the subject, only one mineral appears. The series of tin control schemes supplies the sole instance the ILO could find of a government-sanctioned commodity agreement outside of agriculture. The other commodities on the list are wheat, sugar, coffee, tea, beef, rubber, and timber. The agreements on several of these commodities are of regional, or otherwise limited, scope. The agreements relating to fishing and allied industries are omitted. On these see J. Tomasevich, *International Agreements on Conservation of Marine Resources*, Food Research Institute, Stanford University, 1943.

The ILO report also omits governmental or quasi-governmental controls of specific commodities on a national scale, even though such controls may rather effectively regulate the flow of supplies to world markets. Silk, cocoa, jute, sisal, quebracho, and wool have been subject at one time or another to such arrangements. See Eugene Staley, *Raw Materials in Peace and War*, Council on Foreign Relations, New York, 1937, Appendix; cf. J. W. F. Rowe, "Artificial Control Schemes and the World's Staples," *Index*, Svenska Handelsbanken, April 1935, p. 75.

29. Certain net importing countries are among the signatories of the wheat, sugar, coffee, and beef agreements. The importing countries may agree to take stipulated import quotas but more frequently they simply give assurances not to interfere with (or place more than stated burdens on) the entry of supplies from abroad in a specified volume for a given period. The rubber agreement provides for consultation with representatives of industrial consumers, but their functions are purely advisory. See *Cartels in Action*, Chap. 3.

the line of least resistance: past performance. Every intergovernmental commodity agreement of record conforms to the private cartel practice of freezing members' shares in the world market in the proportion, broadly, of their respective exports of the given commodity during some base period.

This is the basic standard of apportionment, but the relative bargaining power of the member countries usually modifies it in application. Less often than with private cartels—in which the members are themselves commonly producers—is bargaining power closely correlated with productive efficiency. In intergovernmental pacts bargaining strength is diplomatic leverage. With a transfer in the bargaining forum from the countinghouse to the chancellery, all the tactics of Great Power diplomacy and power politics come into play. A powerful state may be able to win important concessions from a less powerful one even though on a comparative cost basis the first country may occupy a weaker position.

*Commodity Agreements Not Very Flexible*

Once a group of governments representing the principal sources of supply of a given commodity fixes quotas, these allotments are difficult to change. Producers in each country acquire a vested interest in their share of the market and as their government helped them get it they are seldom disposed to accept any whittling down of their share. Regardless of technological or other changes in the conditions of supply, regardless of the persistence of high-cost production under the sheltering wing of the intergovernmental agreement, they cling to their assigned "privileges, priorities, and preferences." For the same reasons, these commodity agreements tend to be self-perpetuating. Though their sponsors frequently give as a ground for introducing them the "exceptional" and "extraordinary" conditions confronting the producers, and though few agreements by their terms run for more than five or six years without renewal, the controls once established seldom prove temporary.

The spread and the persistence of restrictive international commodity agreements, despite their inherent limitations, reflect a quest for economic security. Governments have set up market controls rather than see their farmers, or primary producers, bear the burdens that competitive readjustments would require. The alternative to

arbitrary control of the market might be bankruptcy, and bankruptcy not alone for the primary producers but perhaps also for the national economy and the government itself. Or so it has seemed to many countries with heavy stakes in raw material industries. And in the absence of any promising proposals for a better way out, they may have been right.

Experience with these market control arrangements has not been gratifying. Joseph S. Davis, after an incisive review of all the experiments on record, recently summarized it as follows:

> Pre-war and wartime experience with I.C.A.'s [Intergovernmental Commodity Agreements] brings out the great difficulties and delays incident to reaching and rationally revising agreements and their vulnerability to breakdown, especially when numerous countries have important conflicting interests. It reflects tendencies to rely unduly on a favorite restrictive device, export quotas; to be timid in the face of strongly backed nationalistic commodity policies; and to avoid grappling with problems of fundamental economic readjustment.[30]

Intergovernmental commodity agreements are subject to the same inherent weaknesses as private cartel arrangements. These weaknesses are three: (1) the risk of defection or noncompliance by members, (2) the risk of inadequate coverage of the controls, and (3) the risk of displacement of the regulated commodity by synthetic or other substitutes.

*Risk of Defection or Noncompliance*

Defection is a danger that always casts its shadow before. The agreements on wheat in 1933, sugar in 1937, and coffee in 1940 affected international markets only slightly because each embodied such liberal concessions to particular countries in order to obtain their adherence and forestall their defection that little reduction of supplies resulted. Even so, when Argentina had a bumper wheat crop in 1934, it disavowed its export quota commitments. The United States as the principal coffee-importing country sponsored the 1940 agreement primarily for political reasons—in support of hemisphere solidarity. Accordingly, the agreement set export quotas that involved virtually no restriction on the "good neighbors" to the south.

30. Joseph S. Davis, "Experience Under Intergovernmental Commodity Agreements, 1902–45," *Journal of Political Economy*, June 1946, p. 220.

The risk of defection or noncompliance by members of an intergovernmental commodity agreement is particularly great because, unlike the situation in private cartels, the members are not producers of the commodities they would regulate. Yet control of production is imperative to make restriction of exports effective. Each signatory government faces the difficult task of enforcing output limitations on domestic producers. Because producers of staple raw materials, even within a single country, are usually numerous and scattered, governments ordinarily do not find this an easy task. Even assuming that the articulate majority of the domestic producers approve their government's action in adhering to an international control scheme, rarely can the government carry out its commitments without coercing some producers—actual or potential—to prevent them from increasing output beyond the contemplated limit.[31]

Commodities differ greatly in their susceptibility to production control. In oil, for example, output proration is generally acceptable and therefore easily enforceable because most producers are acutely aware from experience of the consequences of unregulated production. In tin, production is sufficiently concentrated so that the problem of fixing quotas and enforcing restrictions on output is comparatively simple. But for almost all agricultural commodities the situation is diametrically different. It is exceedingly difficult to devise an equitable restriction scheme and enforce it on thousands of small-scale cultivators, scattered, unorganized, using resources of very uneven quality, lacking knowledge of unit costs, and in some countries mainly illiterate. Indeed, the problem is virtually insoluble by other than arbitrary methods.

Acreage restriction, prohibition of new plantings, incentive payments, all may help; but the loopholes for noncompliance are wide and numerous. When a government reduces allowable acreage for a given crop, the farmer may cultivate more intensively the smaller area planted, so that higher yields per acre may offset the reduced acreage. Moreover, whether the restriction applies directly to output or to acreage, instead of permitting his arable land to lie fallow the farmer may cultivate other crops or enlarge his livestock business. Unless commodity control schemes were to cover all crops—indeed

31. That is to say, beyond the export quota plus the amount, if any, that the domestic market will absorb at a "satisfactory" price.

all farming operations—and unless they were closely articulated, output restrictions on some farm products would tend to expand output of others. One scheme's success may contribute to another scheme's failure—or reduce farm income from uncontrolled crops.

Again, the people of different countries, even the people of different classes within the same country, differ greatly in their amenability to production control measures. Farmers are a notably independent class. Even among the producers of a single farm product, conflicts of interest in quota determination are numerous and often sharp. Perhaps because they live in a region especially favored by nature, some farmers can produce a particular crop profitably at a price that would ruin other growers either in less-favored regions of the same country or abroad. These low-cost producers must become reconciled to some sacrifice of their potential advantages in order to keep high-cost producers in line, if a control scheme is to work.[32] But many of them balk, and unless their governments restrained them would go it alone. Few governments have much stomach for coercing farmers. Fewer still are equipped to enforce a restriction of agricultural output. When stocks pile up behind the export dam, something is bound to break.

### *Risk of Inadequate Coverage of Commodity Agreements*

Interlopers are a constant menace to commodity control agreements. To bring all important producing countries into agreement is difficult, even though the majority may be willing to make substantial concessions to "hold-outs." Countries with comparatively undeveloped resources and a high potential productive capacity but relatively small actual capacity will ordinarily be reluctant to limit their exports. Thus in the tin cartel it took long negotiations for the Dutch, British, and Bolivian Governments to obtain the adherence of the French (Indo-Chinese), Belgian (Congo), and Siamese Governments, and except for Siam the quotas finally granted them not only exceeded their current capacity but left room for future

32. The explanation of the readiness of low-cost agricultural producers to accept quota restrictions probably lies partly in their lack of accurate knowledge of costs. Not only are low-cost producers seldom aware of the relation between unit costs and volume of output, but the high-cost producers may have great staying power. Especially in tropical countries, native producers are quite unresponsive to price declines. See the analysis of native rubber culture in the East Indies and sugar culture in Cuba, in *Cartels in Action,* Chaps. 2, 3.

growth.[33] China never joined the cartel. Before the war, exports from nonmember countries were increasing.

The Dutch refused to cooperate with the British in the first rubber cartel. When the British independently reduced their exports, under the Stevenson Plan, the Dutch increased theirs. Netherlands East Indies exports rose during the six years of the Plan from 102,000 tons a year to 231,000 tons, or 126 per cent, while exports from British Malaya increased less than 10 per cent from 212,000 tons a year to 232,000 tons.[34] The restrictive policy of the second rubber cartel, of which the Dutch were members, undoubtedly contributed to the continued growth of the rubber plantation industry in Liberia, Brazil, and other areas not represented in this intergovernmental commodity agreement. The stories of Brazilian coffee valorization and of the Sicilian sulphur consortium point the same moral.[35] The favorable opportunities that control schemes give potential producers outside the area in which their restrictions apply apparently are irresistible attractions.

The Draft Wheat Convention of 1942 between Argentina, Australia, Canada, and the United States recognized the threat of outside competition to the success of the market control plan and met it in a forthright way.[36] Article IV, Section 12, of the Convention provided that:

> The contracting governments recognize that international trade in wheat should be distributed on a fair and equitable basis among all countries which export wheat and they agree that the effective operation of the agreement

33. See K. E. Knorr, *Tin Under Control,* Food Research Institute, Stanford University, 1945, pp. 108, 112, 133-35. It took three years to sign up French Indo-China and the Belgian Congo. Siam joined in 1931, a few months after the agreement became effective. It got very easy terms.

34. Planters tapped their trees more intensively, restored and increased production in small plantations abandoned after World War I, made extensive new plantings on the larger plantations, and introduced improved horticultural methods, particularly bud grafting, that shortened the growing period and greatly increased yields. See *Cartels in Action,* Chap. 3.

35. For the best account of coffee valorization, see V. D. Wickizer, *The World Coffee Economy,* Food Research Institute, Stanford University, 1943. On the Sicilian sulphur consortium, consult *Pyrites and the Sulphur Industry,* U.S. Tariff Commission, Washington, 1919, Pt. III; and R. H. Montgomery, *The Brimstone Game,* Vanguard, New York, 1940, Chaps. 4, 5.

36. The signatory governments built on experience. The four principal wheat-exporting countries had joined the International Wheat Conference of 1933 and with some eighteen European countries, predominantly wheat importers, had fixed export quotas. The Conference disintegrated when Argentina repudiated its commitments. See Davis, *op. cit.;* and *Intergovernmental Commodity Control Agreements,* Introduction and pp. 1-25.

should not be impaired by abnormal exports from countries that have not acceded to it. Accordingly the contracting governments shall cooperate in taking, on the advice of the Council, such practicable measures as may be necessary to attain this end.[37]

This declaration bears a strong resemblance to a passage in the Düsseldorf Resolutions.[38] If it means anything at all, it means that the signatory governments propose to take reprisals, in some form or other, against any wheat-exporting country that by declining to restrict its output or exports threatens to upset the plan.

*Risk of Displacement by Substitutes*

The higher prices that result from restriction of supply encourage the development and wider use of substitutes. Scrap metals, reclaimed rubber, and reworked wool, for example, have cut heavily into the markets for the corresponding virgin raw materials. Because of their exceptional resistance to corrosion and their relatively high value, recovery of secondary tin and copper is well organized. Probably only precious metals have smaller percentage losses in consumption.

For natural fibers and wood products, technological advances have provided a wide range of synthetic substitutes: rayon, cellophane, composition wall board, and a great variety of plastics. The synthetics are superior for many purposes to the natural products. Their persistent encroachment on the markets for staple raw materials is one of the most striking aspects of industrial evolution in recent decades. Even though most synthetics have been subjected to cartel controls, especially in the early stages of their development, their ever-increasing variety and steadily increasing output are a constant threat to intergovernmental commodity agreements covering natural raw materials. In the absence of far-reaching coordination of private cartel and intergovernmental commodity controls—something similar to the Soviet Gosplan for the Russian economy—schemes for stabilizing specific raw materials have to contend with a dynamic technology. As they are also confronted by fickle demand, temperamental weather, jealous nationalism, enterprising interlopers, and other stalwart or stealthy opponents, they usually encounter rough going.

37. *Intergovernmental Commodity Control Agreements*, p. 17.
38. See text, Chap. 2.

*Proposals for Renovating International Commodity Agreements*

Nevertheless, stripped of certain questionable aspects that have heretofore characterized it, and fitted out with more promising methods, the commodity agreements program might help relieve farming of some of its discouraging vicissitudes. The United Nations Conference on Food and Agriculture (at Hot Springs, May-June 1943) endorsed a commodity agreements program, and the first report of the FAO Interim Commission emphasized the need for specific safeguards against restrictive action by commodity controls.[39] The State Department's *Proposals for Expansion of World Trade and Employment,* which the British Government accepted in principle, also represented an attempt to adapt commodity agreements to the needs of a dynamic world economy.[40]

The *Proposals* recognized that the postwar period might bring disorder in markets for many primary commodities. The State Department's long-run solution for this problem was to expand world trade and economic activity. This would increase consumption and create an economic environment that would facilitate the shift of productive agents from lines of industry where a surplus exists to other lines where economic opportunities are better. Pending such shifts, the State Department proposed international collaboration in the form of restrictive commodity agreements, on a temporary basis.

> Controls of this sort should not be applied in any case unless the need is real and serious, affecting many people, and not curable by the normal process of competition. And when they are set up they should be strictly temporary, lasting no longer than required to carry out the necessary shifts. Their purpose is not to protect vested interests, but to prevent widespread distress during the course of necessary change.[41]

As an outline of a broad policy, the State Department's *Proposals* are constructive. The war caused dislocations in the world economy so serious that competitive markets cannot smoothly make the read-

39. *Final Act and Section Reports,* United Nations Conference on Food and Agriculture, Department of State, Washington, 1943, Resolutions 14, 15, 25, and *First Report to the Governments of the United Nations by the Interim Commission on Food and Agriculture,* Washington, August 1944, pp. 24-26. (This report will hereinafter be cited: *First Report,* Interim FAO.)

40. *Proposals for Expansion of World Trade and Employment,* Department of State, Washington, November 1945, Chap. 5.

41. *Ibid.,* p. 6.

justments that peacetime consumption requires. Even in the third year after the fighting stopped, temporary shortages of many goods continue to harass consumers. But when the effects of inflationary war finance wear off and prices start to fall, with readjustment still incomplete, restrictive commodity control schemes are likely to become popular.

It will be difficult to rigorously confine such schemes to the scope that the Department's *Proposals* specify—assuming that the general principles outlined prove acceptable to other trading nations. How "real and serious" must a "need" be to warrant an intergovernmental pact to protect the interests of politically strong and articulate farm blocs? The "normal process of competition" can cure any economic maladjustment, however severe, but unfortunately those who take the medicine are not the ones who get the chief benefit of the cure—if indeed they survive at all! The economically ill usually seek a sugar-coated palliative; and if it gives relief they frequently become addicted to its use. Is it possible to increase economic security for primary producers without putting twentieth-century agriculture and mining into fourteenth-century strait jackets?

### *Methods of Abating Wide Fluctuations in Farm Income*

Price raising is not enough. Output restriction is, by itself, uneconomical.[42] Such methods only obscure the underlying maladjustments. Directly or indirectly they tax consumers for the support of misdirected productive effort. They subsidize vested interests to preserve a status quo that may have lost its reason for being, for example because of a fall in the real costs of farm production. They foster the illusion that society owes farmers a living as farmers, regardless of how poorly they adjust farm production to market demand, and regardless of how lax, incompetent, or inefficient farm management may be.

Certain other farm security measures are more promising. Among these are the promotion of agricultural research and the systematic

42. To produce less of one good and more of another may often be economical. But to produce less of one good and no more of others is always uneconomical—unless the cultural advantages of leisure are an offset to the production foregone. Probably few farmers would pretend that programs for deliberately reducing output have any other purpose than to enable them to get a higher price.

assembly, interpretation, and dissemination of information on the supply and demand for farm products.[43] The achievements of the United States Department of Agriculture in both these fields are outstanding. In particular, the *Agricultural Statistics* series and the annual *Agricultural Outlook Charts* are invaluable aids to planning farm production.[44] The extension of these services on a world-wide scale, as the United Nations Food and Agriculture Organization proposes, should help stabilize farm incomes.[45] Similarly, setting uniform commodity standards for farm products entering international trade and promoting cooperative organization among producers and consumers should improve the efficiency of agricultural marketing.

But at best it will take decades to develop adequate research and educational activities, especially in regions of low productivity and illiteracy. Farmers want relief now—or soon will be demanding it again, more insistently than ever.[46] What can governments do to help them without adopting restrictive control measures?

### *Advantages of a Buffer-Stock Program*

Two measures that avoid coercive crop restriction deserve careful study: buffer-stock programs and crop insurance plans. By buying up supplies of primary agricultural products in periods of surplus production and low prices and unloading them in seasons of shortage and high prices, an adequately financed and prudently administered international agricultural agency could do much to stabilize farm income. Such a program would enable the agency at once to make advantageous use of its research and statistical services. It could help materially in levelling out the peaks and troughs of farm price fluctuations. Some part of annual output is now carried over from year to year, of course, thanks primarily to the speculative

43. See, for example, *First Report,* Interim FAO, pp. 12-16.
44. As Mordecai Ezekiel has pointed out, the *Outlook Charts* have a "batting average" of about 85 per cent, which is a sufficient index of their dependability. See his "Remarks" in *Journal of Farm Economics,* February 1938, p. 22.
45. See *Second Report to the Governments of the United Nations by the Interim Commission on Food and Agriculture,* Washington, July 1945, recommending merger of the International Institute of Agriculture with the FAO. See also Howard S. Piquet, "Functional International Organization," *Annals of the American Academy of Political and Social Science,* July 1945, pp. 43 ff.
46. See J. D. Black and S. S. Tsou, "International Commodity Agreements," *Quarterly Journal of Economics,* August 1944, pp. 5 ff.

activities of private traders. But the long record of alternate years of wasted surplus and dearth bordering on famine attests to the inadequacy of the scale of these operations and of the storage facilities that private interests, including industrial consumers, such as flour millers, provided. As the late John Maynard Keynes pithily observed: "The competitive system abhors the existence of stocks with as strong a reflex as nature abhors a vacuum, because stocks yield a *negative* return in terms of themselves." [47] While this appraisal perhaps exaggerates the deficiencies of profit-motivated, speculator-financed stock-piling activities, it does point to a serious shortcoming in the traditional agricultural marketing system. That system did not grow up in an age of social security.

### *Buffer-Stock Program Compared With Ever-Normal-Granary Plan*

The buffer-stock proposal is in many ways parallel to the "ever-normal-granary" plan that Henry Wallace has done so much to popularize. The Wallace program has been severely criticized on several counts.[48] A major objection is that the accumulation of large reserves, even in strong hands, has a price-depressing influence. This part of the indictment is not wholly warranted. To be sure, the larger the potential supplies overhanging the market at any given time, the greater is the likelihood that prices will lose buoyancy. But by the same token, the removal from the market of a large part of the excess supplies in a season of surplus will tend to hinder price declines.

Another objection to the ever-normal-granary plan is that the costs of holding reserve stocks are high.[49] Undoubtedly, insurance costs,

47. *Op. cit.*, p. 449. Keynes advanced four reasons for the great discrepancy or "opposition" between private competitive interests and the general interest "in respect of stocks." First, storage costs are high. Second, speculators are not eager to buy when prices decline because they know producers cannot refrain from selling, or to sell when prices rise because they know producers cannot rapidly increase supplies. Third, industrial users refuse to accumulate and hold substantial inventories because they can hedge, and it is safer not to speculate. Fourth, the long-term holding power of speculators is limited, in any case, because their whole business is built on a play for a rapid turnover.

48. See, for example, J. S. Davis, "Ever-Normal Granary," *Journal of Farm Economics*, February 1938, p. 8.

49. "Carrying even an extra 200 million bushels of wheat would probably cost at least $30 million a year." *Ibid.*, p. 18. This appears to be a rather high estimate. On the basis of 1938 wheat prices, it would mean carrying charges equal to about 15 per cent a year. Keynes (*op. cit.*, pp. 456 ff.) estimated that 4 per cent would suffice to cover "storage costs."

risks of market fluctuations, and interest charges are a substantial burden, whoever carries them. But that the costs of internationally organized buffer-stock operations would outweigh the benefits is improbable on three grounds. First, in part these costs would be in lieu of carrying charges that would otherwise be borne by private speculators. For it is clear that, as the critics insist, the accumulation of buffer stocks under public control would displace in some measure the inventories that private speculators, producers, and consumers otherwise would hold. But these charges would presumably be at a much lower rate when the operation is in the hands of an intergovernmental agency.[50] Second, and more important, by mobilizing world stocks the relative size of the carry-over adequate under an intergovernmental buffer-stock administration would be substantially lower than under the ever-normal-granary plan operated on a national scale.[51] Third, as compared with the indirect social and economic costs of *not* holding adequate reserve stocks, the pecuniary costs of holding them shrink to small proportions.[52] The indirect costs of the intermittent stagnation and overstimulation of the world's agricultural industries are staggering. If a buffer-stock arrangement allayed them appreciably it could hardly prove "unprofitable."

### *Conditions for Success of Buffer-Stock Operations*

The crucial question is whether an intergovernmental administrative agency can manage buffer-stock operations more competently and with greater foresight than the body of private speculators trading in futures on organized commodity markets.[53] Barring politi-

50. Partly because public authorities can borrow at a lower interest rate than private enterprisers. Partly, also, because the prime function of an international buffer-stock agency would be the abatement of market risks.

51. Davis ("Ever-Normal Granary," p. 19) makes this a major ground of criticism of Wallace's domestic plan: that a national reserve to insure an adequate domestic supply in all contingencies would be uneconomically large, in view of the volume of foreign supplies potentially available.

52. Cf. Keynes, *op. cit.*, pp. 450, 458.

53. As Staley says (*op. cit.*, p. 83), the question is "whether a consciously administered control scheme can operate more . . . efficiently than the automatic mechanism of a speculative futures market." He concludes (p. 112): "There is *a priori* no reason to suppose that the inevitable misjudgments of control technicians would be worse than the inevitable misjudgments which occur in the speculative responses of individual producers [and speculators!] to price movements. The real difficulties would be not so much technical as political." This judgment appears unexceptionable, but for certain additional factors bearing on the issue see discussion in the text preceding and following.

cal interference, three factors indicate that competent public officials, as managers of a buffer stock, might be able to make the price system a less capricious arbiter of the fortunes of producers than can private traders operating in futures markets. The administrators of such an intergovernmental program would presumably have more reliable and complete information than private speculators on actual and prospective conditions of supply and trends of demand. They would also have more abundant funds for giving effect to their interpretation of the market situation. Finally, their operations are less likely to aggravate price disturbances. They will not be lured by the prospect of short-run profits to hold up purchases, or sell short, when prices are falling, or to postpone sales when prices are rising.

To make a buffer-stock program a genuine stabilizing influence, however, administrators must be given broad managerial discretion. To require them to buy and hold minimum stocks of given commodities or maintain specified prices (whether in dollar and cents terms or in terms of fixed price relationship with other goods) would be to foredoom the whole experiment. Even with unhindered discretion —limited by an express or implied mandate to prevent prices from falling to unprofitable levels—experience with administrative price stabilization through open-market operations has not been encouraging. The record of the Federal Farm Board, the Canadian Wheat Pool, and the Brazilian Coffee Valorization Scheme in the thirties points to the need of divorcing an intergovernmental buffer-stock program from any price-pegging strategy.[54] But the record does not prove that legislative ingenuity could not devise a formula setting reasonable floor and ceiling prices for basic agricultural commodities, geared perhaps to the general price level, yet leaving to administrative authorities sufficient discretion to provide for flexible adjustments. The objective of a sound buffer-stock program must be to iron out fortuitous fluctuations in farm prices, not to insure remunerative prices to all farmers regardless of cost.

54. On the Federal Farm Board fiasco, see Davis, "Ever-Normal Granary"; on the Canadian Wheat Pool disaster, see W. L. Holland (Ed.), *Commodity Control in the Pacific Area,* Institute of Pacific Relations, New York, 1935, pp. 125-56; and on how coffee valorization reaped the whirlwind, see Wickizer, *op. cit.,* Chap. 10. On the lessons of these episodes generally, see Staley, *op. cit.,* pp. 83-93.

The big drawback to a buffer-stock program for lessening the price swings of farm products is the danger that the administrative body will be exposed to overpowering political pressures. Without independence from the persistent solicitation of special favors for regional or national producer groups, no administrative body, however competent, disinterested, and farsighted its members might be, could avoid the mistakes of past attempts to stabilize the prices of agricultural commodities.[55] It will require political ingenuity of a high order to immunize an international buffer-stock administration from the paralyzing pressure of special-interest blocs. The producers of every farm product will want the buffer-stock managers to buy continually, never to sell. No other policy would be half so advantageous to them. They will not lack this penetrating insight into the economic mysteries, nor will they modestly hide their light under a bushel. Their insistent demands that the buffer-stock managers travel a one-way street will be difficult to withstand.

### *Immunizing Buffer-Stock Administration From Political Pressure*

Centering the administration of all intergovernmental buffer-stock operations in a single agency might reduce the hazards of political pressure. There is much to recommend a multiple-commodity buffer-stock scheme for such agricultural products as in its discretion an intergovernmental agency might see fit from time to time to include in its operations. It should strengthen the resistance of the buffer-stock managers to the self-interested pressure of particular groups of producers. Wheat producers would compete with producers of cotton, coffee, rubber, and all other major farm commodities, and so would each of these with the others, for the support of their particular market. With limited funds, the control agency could grant favors to one group only by denying them to others. In a measure, thus, these bloc pressures might cancel out.

55. Recent American experience with governmental control of cotton does not encourage confidence in the ability of public bodies to resist the insidious pressure of compactly organized blocs of special interests. Despite the tremendous inroads that the war made in government stocks, despite increasing demand and rising prices, despite increasing output of synthetic substitutes, the government has continued to pour subsidies out to cotton planters at an improvident rate. See *Agricultural Statistics*, Department of Agriculture, Washington, 1946, p. 522.

J. S. Davis makes the danger of their perversion by pressure politics one of the principal grounds for his opposition to buffer-stock proposals. See his *International Commodity Agreements: Hope, Illusion, or Menace?*, Committee on International Economic Policy, New York, 1947, particularly pp. 33-35.

To centralize the administration of buffer-stock operations would also economize public funds. The high points of accumulation (stocks in storage) would seldom come at the same time for many farm products. Intergovernmental holdings of sugar and wool, for example, probably would not be near either seasonal or cyclical peaks simultaneously.[56] More important, a centrally administered multiple-commodity buffer-stock program might help in counteracting cyclical fluctuations in business generally. Like a public works program, properly administered it could compensate in part for a shrinkage in private purchasing power during depressions and take some of the lifting force off rising prices when a boom is on. As Keynes suggested, an economy might accept an increase in commodity reserves when prices are falling as partial substitution for an increase in gold reserves.[57] He added, rightly, that this is no disadvantage. It is, if anything, even more "profitable" for society than it is for an individual to substitute goods for gold when goods are cheap, and gold or money counters for goods when goods are dear.[58]

### *Case for a Crop Insurance Program*

Crop insurance has a more limited scope than buffer-stock schemes have in stabilizing farm incomes. It applies only to income variations caused by variations in crop yields, not to those caused by fluctuations in demand or price changes. But unpredictable natural contingencies, such as drought or excessive rainfall, pest invasions or blights, are important sources of farm insecurity.[59] Such risks are insurable. Yet on their own initiative farmers and insurance companies have not provided adequate crop insurance. Governments have an interest in promoting a system that would relieve those farmers who in a given year happen to lose their crops, say because

56. Keynes threw out a hint of the possibility of economy in this way. He remarked (*op. cit.*, p. 456) that it is not essential that the commodities held should always be the same ones.

57. *Ibid.*, p. 458.

58. Of course, there's the rub: to buy cheap and sell dear. However, a well-conceived and wisely managed intergovernmental buffer-stock program for agricultural products is probably an experiment worth making. It undoubtedly involves great risks; but until the experiment has been tried, there is no solid ground for dismissing it as impracticable. Cf. Oscar Zaglitz, "International Price Control Through Buffer Stocks," *Journal of Farm Economics*, June 1946, pp. 413-33.

59. In fishery comparable contingencies are migration of fishes and variations in the reproduction rate of certain species. Cf. Tomasevich, *op. cit.*, Chap. 1.

of blight, from the crushing burden of this catastrophe. If all producers of wheat regularly bear a small part of the losses from crop failure, which occur irregularly in scattered localities, none need be wiped out when his crop fails. Spreading out the risk is as sound and salutary a principle here as it is with fire hazards.

Moreover, if an international crop insurance program were extended to the major agricultural products, probably a large part of the inevitable cost—the amounts necessary to indemnify farmers—would fall on consumers. For if all producers of such crops had regularly to pay a stipulated insurance premium, based possibly on acreage planted, this additional expense of production, comparable to a tax assessment, might tend to limit the output of the more "risky" crops.[60] In so far as farmers adjusted their production so as to bring supplies into line with consumers' demand at prices covering costs, the insurance program would be of general economic benefit. And in so far as the insurance premiums brought "hidden" costs—the risks of crop failure—into the open, they should tend to have this effect, even though farmers may not calculate their costs as closely in planning their production as manufacturers ordinarily do. In this way farmers should be able to recoup part, at least, of the insurance premiums in the prices they get for their products.

A major difficulty in introducing a comprehensive crop insurance program is to adjust the premium to the risk.[61] As the risk of drought is less for an Illinois than for an Alberta wheat farmer, his premium contribution should be less. But it will require experience to assess risks equitably. Because of the long-run advantages of an insurance program, governments could well afford to underwrite the possible initial losses from inaccurate assessment of risks.

A major advantage of this kind of intergovernmental farm stabilization program is that the broader its coverage, the lower its cost per unit of output. The incidence of bad weather (the major contingency insured against) is generally localized in any given crop

60. In fact, one of the knotty administrative problems a crop insurance program would face would be to prevent the insured farmers from limiting their output too much. For example, in the event of bad weather during the growing season, a cotton grower who had paid his insurance premium might prefer to rely on the indemnity thus assured him rather than to spend time and money cultivating the planted acreage in an endeavor to save as large a portion of the crop as possible.

61. Cf. Schultz, *Agriculture in an Unstable Economy*, pp. 217-18.

year.[62] But the production of few major agricultural commodities is localized. Most crops are widely distributed geographically, some even over both the temperate and tropical zones. As the risk of crop failure on a world-wide scale is comparatively small, an international crop insurance program should prove readily workable and economically beneficial.

Neither a buffer-stock program nor a crop insurance program would interfere with transfers of productive resources from points of relative surplus to points of relative scarcity. Properly administered, either or both together would ease the pains of transfer without hindering change. By making agricultural price movements less erratic they would encourage the introduction of cost-reducing techniques. Coupled with improved research and statistical services, they would tend to place a premium on economic fitness, not to protect economic inefficiency. In brief, such a program would tend to do those things that competition tends to do in the long run, but it might do them better. The penalty for not promoting the adjustment of farm production to changing market demands is not necessarily economic disaster. But it is likely to be lower living standards, reduced real income, and increasing unemployment—not alone for farmers but for everyone.

### *Outline of a Conservation Program for Mineral Industries*

If the main problem in agriculture is to prevent surpluses from disturbing economic equilibrium, in mining it is to prevent scarcities from doing so. One trait is common to both fields: their unsteadiness as sources of income. In neither field, however, does the problem always shape up according to rule. Some branches of mining—bituminous coal notably—have for years faced chronically depressed markets. But the majority, including petroleum and most of the metal industries, have suffered only intermittently from overabundant supplies. By and large, the mineral industries have contrived through financial integration and cartel manipulation to bring supply under effective control. Though the concerted restrictions have not assured a continuous sellers' market, they have constantly

62. A sisal crop insurance program that covered only Tanganyika's production might be perennially exposed to bankruptcy. A program that covered at the same time producers in Mexico, the Philippines, and elsewhere would be a much safer venture. See *The Economist* (London), June 15, 1946, pp. 974-75.

impeded an economical allocation and full utilization of resources.

Mining is a gamble. Not only does Nature hide her mineral resources, but when they are discovered, great differences emerge in unit costs of production between mines exploiting lower-grade, thinner, less-accessible deposits, or deposits approaching exhaustion, and those exploiting newly discovered, richer, or more easily worked seams, lodes, or pools. The extremely speculative character of the mining industries makes for either competitive waste in skimming the cream of these irreplaceable resources or monopolistic waste in hoarding them as "reserves." [63] Both tendencies are socially improvident.

The principal objective of a sound intergovernmental commodity agreement program for minerals, accordingly, must be to achieve a steady rate of exploitation of these exhaustible natural resources, a rate that, in the public interest, balances present against deferred uses and maximizes the over-all efficiency of recovery. In essence, this calls for an international mineral conservation program. Only public regulation of the rate of extraction can bring into general practice the most efficient methods of recovery and at the same time encourage men to take full advantage of the opportunities that available resources afford for investment, employment, and economical use.[64]

### *Why Effective Mineral Raw Material Controls Must Be International*

Strategic considerations also point to the need of international action in this field.[65] Their requirements for national defense give the leading industrial countries a large stake in conservation of the world's mineral raw materials. But their peacetime civil requirements also make mineral conservation important to them. Their sustained prosperity depends on access to these indispensable materials

63. See Watkins, "Scarce Raw Materials," pp. 227-60. See also Staley, *op. cit.*, pp. 203-04.

64. See Watkins, *Oil: Stabilization or Conservation?*, especially Chaps. 4, 8.

65. See Brooks Emeny, *The Strategy of Raw Materials*, Macmillan, New York, 1934; W. R. G. Greaves, *Raw Materials and International Control*, Methuen & Co., London, 1936; *The Problem of Raw Materials*, League of Nations, Geneva, 1937; Staley, *op. cit.*, Chaps. 1, 2; Evans Clark (Ed.), *Boycotts and Peace*, Twentieth Century Fund, New York, 1932; C. K. Leith, *World Minerals and World Politics*, McGraw-Hill, New York, 1931; and *idem*, with J. W. Furness and C. Lewis as coauthors, *World Minerals and World Peace*, The Brookings Institution, Washington, 1943.

scattered over the globe. No country is self-sufficient in all of them. Some minerals are found only in remote regions. They may form the primary if not the sole link between these out-of-the-way countries and international markets and make their economies exceptionally vulnerable to the inordinate fluctuations to which mineral industries, left to themselves, are subject.

Conceivably, a series of intergovernmental commodity agreements, each relating to a specific mineral, might implement an international conservation policy for exhaustible natural resources. The major drawback to such a procedure is the sharp divergence of interest among different countries on the elements of a sound conservation policy *as applied to any particular mineral product.* One country, or a small group of countries, may be the chief source of supply of the given mineral.[66] If so, that country or group is unlikely to look with favor on a proposal to join with others in defining a conservation policy for the resource or to share with others the regulation of its exploitation. Interests of national defense might well block a conservation policy on certain highly strategic materials, and then international jealousy, recrimination, and tension would thwart the entire program. Indeed, such a turn of events could easily lead to more disastrous consequences.

If, on the other hand, the United Nations were to approach the problem on the firm foundation of principle, seeking to apply a basic conservation policy to the whole range of mineral resources, the chances for concerted action on an adequate program should be much greater. Every country has an interest as a consumer, directly or indirectly, of minerals; and most countries also have an interest as producers of one or more of these materials. These interests would mutually interact on one another in shaping each country's diplomatic strategy in negotiating a comprehensive intergovernmental mineral resources conservation compact, and they would tend to counterbalance each other. Even if a given country's stake in mineral exports outweighed its stake in mineral imports, or vice versa, the necessity of dealing with many importing (or exporting) countries acting in unison would temper its policies. Recalcitrance in such circumstances would therefore be shortsighted.

66. Examples of mineral resources with narrowly localized sources of supply are diamonds, molybdenum, cryolite, mercury, platinum, asbestos, and nickel.

*Methods of Effectuating a Mineral Conservation Program*

The basic choice in implementing such a policy is between indirect regulation of mineral production through the price system and fiscal measures, on the one hand, and direct regulation of output and methods of extraction on the other. The administrative process is not well adapted to making and executing decisions on such managerial matters as the scale and techniques of production.[67] Moreover, to assemble a staff adequate in qualifications as well as in numbers for supervising mining operations at scattered points all over the world would involve wasteful duplication of "overhead" expenses, even if it were not a quixotic undertaking. By enlisting the police powers of signatory states, however, an intergovernmental conservation agency might be able to enforce certain rules on operating procedure. Promulgation of minimum or maximum standards on such matters as oil well spacing, gas-oil ratios, ore content of tailings, might effectively supplement indirect methods of promoting conservation.

*Conservation and Stabilization Through Differential Pricing*

In a private enterprise regime the simplest, easiest, and on the whole probably the most reliable, means of influencing the output policies of operators is through the price system and fiscal measures. In view of the wide range of unit costs in all the mineral industries, the social advantages of differential pricing among various supply sources are pronounced.[68] The United States Government used this device during the war to increase output from low-grade ore deposits, notably of copper and zinc, at considerably lower cost than would have resulted from a uniform price policy.[69] Differential pricing also has marked social advantages as a device for expanding or contracting consumption in certain directions.[70] Shortly before the

67. See Robert E. Cushman, *The Independent Regulatory Commissions,* Oxford University Press, New York, 1941, *passim.*

68. Differential pricing here means the offer of higher prices for the output from certain deposits of a given mineral than the prices paid at the same time for the output from other sources. The economic justification for this departure from the general rule of a one-price market lies in the conservation interest which it could serve. Whether, in practice, it would serve that interest depends on factors discussed in the text following.

69. A one-price policy would have presented owners of low-cost mines with a substantial unearned increment in the form of price advances wholly unrelated to any changes in their unit costs.

70. See "Economic Problems in a Period of Transition: International Commodity Controls, II," *Review of International Cooperation,* January 1943, p. 16. Yates (*op. cit.,* p. 235) mentions the satisfactory use of this device by the English Milk Marketing Board.

war the Food Stamp Plan for encouraging the consumption of certain surplus agricultural commodities indicated the possibilities of this means of regulating distribution.[71]

An international mineral conservation agency could make use of differential prices to promote more economical exploitation. In boom times lower prices for minerals from certain mining districts—that is to say, prices lower than the operators could get in an open market under a one-price system—would slow down extractive operations in those regions to a rate that would result in less waste of potentially recoverable resources.[72] When prices are going up the urge to cash in on a good thing often leads mine operators to by-pass thin veins or skimpy deposits. They want to reach the richer pay dirt and get out the mineral as fast as possible. The by-passed material may for all practical purposes be lost forever. Usually the cost of extraction at a later date would be much higher than it would have been when the deposit was first uncovered. Oil pockets left "in the sand" when underground pressure is allowed to push oil to the surface without restraint are an outstanding example of this kind of waste.

When prices are tobogganing, on the other hand, it may not pay to recover any but the richest and most accessible deposits. At such times the proposed international agency could promote conservation by offering mine operators in certain districts higher prices than they could get in a one-price market.

### *Limitations of Deliberate Price Differentiation*

It is not easy to select the right times and the right districts for preferential prices. An administrative agency limited to the method of fostering conservation indirectly through the price system would have to steer a course between Scylla and Charybdis. A big hazard in the use of a differential price system is the possibility of its per-

71. See Joanna C. Colcord, "Stamps to Move the Surplus," *Survey Mid-Monthly*, October 1939, p. 305.

72. However, differential pricing could not insure efficient exploitation of oil pools. The migratory nature of oil and its intimate association with gas and water under pressure make unit operation essential to maximum efficiency. The political obstacles to unit operation are great in democratic countries, where land ownership is widely diffused and individual holdings are frequently small.

The problem of oil conservation is specialized and complex. Its adequate treatment is beyond the scope of this study. See George W. Stocking, *The Oil Industry and the Competitive System*, Houghton Mifflin, Boston, 1925, and Watkins, *Oil: Stabilization or Conservation?*.

version through favoritism. The pressure of special interest groups to obtain concessions in the form of higher prices for their particular outputs would be strong. And as experience with oil proration in the United States has shown, there is an ever-present danger that publicly administered conservation measures will be transformed into something closely resembling a cartel program of output restriction. The only safeguard against vitiation in these and other ways of what could be a socially salutary policy lies in the probity, professional competence, and disinterested devotion to the public interest of the officials charged with this high responsibility.

Differential pricing, moreover, is impractical except when a single buyer takes the whole supply or a single seller disposes of the whole supply. To make effective use of the device an intergovernmental mineral conservation agency would have to be empowered to act as sole buyer or seller of these raw materials. As most of the materials are strategically important, present-day governments, with their generally strong nationalistic bias and their great diversity in size, wealth, and power, are unlikely to reach an agreement to confer such commanding powers on an international administrative body. Lacking this authority, the intergovernmental agency could do something to conserve minerals by a judicious buffer-stock policy if granted adequate funds for the purpose. Within the limits set by its revolving fund, it could distribute purchases in such a way as to promote continuity of operations during low-price periods and time its sales in such a way as to check, perhaps, the development of speculative orgies. At best, however, a buffer-stock scheme for minerals would be a slender reed on which to tie a conservation policy considering the financial strength and strategic position of the monopolistic groups that dominate many of these industries.

### *Fiscal Devices for Promoting Conservation*

Fiscal measures provide a more promising way of implementing a genuine conservation policy for minerals, assuming that no intergovernmental agency is going to be given exclusive rights as a first purchaser. The taxing power now rests exclusively with sovereign national states or their subdivisions; but an intergovernmental agency charged with such a crucially important function as conservation might obtain the cooperation of member countries in a concerted

plan for raising (or lowering) excise taxes or customs duties on specific minerals in response to market exigencies.[73] A government that undertook such cooperation could limit the range within which its excise taxes or customs duties on minerals could be administratively adjusted to the international agency's interpretation of current market requirements. Certainly no other method of regulating for the common good the rate of exploitation of mineral resources has the flexibility, effectiveness, and simplicity of the taxing power.

### *Conclusion*

The distinctive characteristic of raw material industries is their unsteadiness. In the main, the expression of this instability in agriculture is price volatility; in mining, erratic output. But wide fluctuations of income are characteristic of both fields. These fluctuations in the purchasing power of a numerically and economically important section of the world's population partly reflect industrial instability, but they are also a factor contributing to industrial instability. They increase the difficulty of maintaining general economic equilibrium.

The differences in the organization of these two main divisions of the raw materials industries and in the nature of their instability are such that it is expedient to distinguish sharply between them in framing corrective policies. An intergovernmental commodity agreements program appropriate to agriculture must focus on abating extreme fluctuations in income following from relative overproduction or underproduction of particular crops. Whatever the proximate cause of excessive or deficient supplies may be in any specific instance, whether some fortuitous factor or farmers' miscalculations, the conditions of agricultural production rule out conspiracy. In these circumstances society has not only an interest in encouraging but also a responsibility positively to promote a better adaptation of agricultural resources to market demands through a continuous process of redirecting the use of farm land and farm labor. An intergovernmental commodity agreements program appropriate to min-

73. For example, a fairly simple and effective device for promoting conservation of oil would be to place a higher tax rate on oil produced without restriction from a pool not operated as a unit than on oil produced under unit operation. It should not be impossible to secure agreement among the principal oil-producing countries to carry out a policy along these lines on recommendation of an international mineral conservation agency, after a painstaking survey had indicated its expediency.

ing, on the other hand, must lay special emphasis on preventing deliberately contrived underproduction and high prices that work against the general interest in full use of resources.

To achieve these goals in either field will require experimentation with a variety of measures. But underlying the whole program, conditioning the success of every measure, is the question of the sort of economic environment in which experimentation takes place. If nationalistic governments and monopolistic businesses maintain a general framework of economic activity that curbs enterprise, restricts production, freezes prices, hampers trade, and shackles technology, no genuine relief or sustained prosperity for agriculture and mining are in sight. Only when they have resolutely renounced the beggar-my-neighbor policies that plagued the twenties and thirties will an environment favorable to a healthy shifting and full utilization of productive resources be realized.

The Bretton Woods achievement of international agreement on monetary policy has opened the door and shown the way to the creation of an economic environment in which an intergovernmental commodity agreements program of the kind here outlined might succeed. A dynamic economy will have stresses and strains, as the engineers say; but with expanding employment and rising income it will be much easier than it was under prewar conditions to gear agricultural and mineral production to the main shaft of the general economy in a way that will insure a smoother, less erratic performance all around.

## *Chapter 10*

# NATIONAL INTERESTS: THE CASE OF BRITAIN

THE LOGIC of economic theory will play little part in shaping national policy toward cartels. Concrete immediate exigencies will count more than general principles, the interests of special groups more than the general welfare. Yet, in the closely knit economic world of today, the leading nations may be unable to advance their individual interests unless they collaborate to promote the general welfare. Sensing this, those who make national policy have shown some disposition to compromise conflicting interests in order to arrive at a general program for the guidance of national policies.

Inevitably, the sharpest conflicts of interest have occurred where ideological differences are most marked. Between Russia on the one hand and Great Britain and the United States on the other, the line of cleavage has deepened. But as Russia and the English-speaking nations have become estranged Great Britain and the United States have come closer together. Largely under American leadership the major trading nations have taken important steps toward international cooperation in the solution of their common postwar economic and financial problems. Such United Nations agencies as the International Monetary Fund, the International Bank for Reconstruction and Development, the Economic and Social Council, and the proposed International Trade Organization all provide machinery for collaborative action. Formal collaboration will have little practical significance, however, unless the member nations follow national policies consistent with the broad objectives of these joint agencies. So far the only one of these instrumentalities in which Russia has taken part is the Economic and Social Council.

### *Anglo-American Financial Agreement*

Approval by Congress, after ratification by Parliament, of the loan agreement of December 1945 between the governments of the

United States and the United Kingdom paved the way for collaboration on long-range commercial policies between the world's two greatest trading nations. The two governments have agreed to work together for general reduction of tariff barriers, elimination of discriminatory trade practices, and regulation of private cartels.

The United States extended to the United Kingdom a credit of \$3,750,000,000, good until December 31, 1951.[1] As part consideration the British Government agreed to do three things to help expand world trade: (1) to seek an early settlement with those countries that built up abnormal sterling balances during the war; (2) to eliminate the so-called dollar pool among countries in the sterling area; and (3) to remove within one year of the agreement all exchange restrictions on current foreign trade transactions.[2]

### *Britain Underwrites State Department's Trade Program*

While these are long steps toward freer world trade, the British Government has gone further. It has underwritten the principles embodied in the State Department's *Proposals for Expansion of World Trade and Employment.*[3] According to the "Joint Statement by the United States and the United Kingdom Regarding the Understanding on Commercial Policy," released December 6, 1945:

1. The agreement became effective July 15, 1946, when the United States Government notified the British Government that Congress had approved it. In addition to the loan of \$3,750,000,000, for financing British imports during the transition from war to peace, the agreement provided for a further credit of \$650 million to cover the final settlement of lend-lease and other claims arising out of the war. For text of the agreement and ancillary documents see *Federal Reserve Bulletin,* January 1946, pp. 15-20.

2. For a fuller account of these complicated arrangements, see "The United Kingdom and Postwar International Trade," *ibid.,* pp. 2-14.

3. Department of State, Washington, November 1945. (This pamphlet will hereinafter be cited: *Proposals.*) A technical staff within the United States Government developed these proposals in preparation for an international conference on trade and employment and presumably the proposals came under discussion during the British loan negotiations in the fall of 1945. No doubt partly on the basis of these discussions, the State Department issued in September 1946 an "elaboration of its *Proposals*" in the form of a *Suggested Charter for an International Trade Organization of the United Nations* (hereinafter cited: *Suggested Charter*). The United Nations Economic and Social Council in effect endorsed this American suggestion when, at its first meeting, in February 1946, it called for an international conference to consider the creation of ITO. See *Suggested Charter,* p. 3. The first session of the conference called by the United Nations to set up the proposed International Trade Organization was held in London during October and November 1946. The conference worked out a draft charter (hereinafter: *Draft Charter*) that followed closely the State Department's *Suggested Charter.* See *Report of the First Session of the Preparatory Committee of the United Nations Conference on Trade and Employment,* Columbia University Press, New York, 1947. The second session of the conference convened at Geneva on April 3, 1947, to review the *Draft Charter* and to negotiate a general reduction of tariffs.

. . . the Government of the United Kingdom is in full agreement on all important points in these proposals and accepts them as a basis for international discussion; and it will, in common with the United States Government, use its best endeavors to bring such discussions to a successful conclusion, in the light of the views expressed by other countries.[4]

The *Proposals* are directed primarily at releasing world trade from the "various restrictions which have kept it small." According to the State Department, four things have held down the volume of international trade: (1) restrictions imposed by governments; (2) restrictions imposed by private combines and cartels; (3) fear of disorder in the markets for certain primary commodities; (4) irregularity, and the fear of irregularity, in production and employment.[5] To reduce these barriers the United Nations sponsored an international conference on trade and employment.

The British are thus committed in principle to supporting the State Department program to curb international cartels.[6] The program provides for the establishment of an International Trade Organization within the United Nations the members of which would agree

. . . to take appropriate individual and collective measures to prevent business practices which restrain competition, restrict access to markets or foster monopolistic control in international trade and which thus have the effect of frustrating the purpose of the Organization [ITO] to promote expansion of production and trade and the maintenance in all countries of high levels of real income.[7]

The *Proposals* recommended that ITO be given authority to "receive complaints from any member (or, with the permission of the member, from commercial enterprises within its jurisdiction who allege that their interests are affected) that the objectives of the Organization are being frustrated by a private international combination or agreement." The ITO would be empowered then to

4. *Federal Reserve Bulletin,* January 1946, p. 15.

5. *Proposals,* p. 2.

6. The State Department program contemplates the formulation of intergovernmental commodity agreements, but it aims to limit them severely. See text, Chap. 9.

7. *Suggested Charter,* Article 34, pp. 25-26. The comparable article (Article 39) of the *Draft Charter* sets forth essentially the same ideas in rather more ambiguous terms. The general purposes of the ITO as outlined in the *Suggested Charter* would be "to promote national and international action for the expansion of the production, exchange and consumption of goods, for the reduction of tariffs and other trade barriers, and for the elimination of all forms of discriminatory treatment in international commerce . . ." *Suggested Charter,* Article 1, p. 1.

"make recommendations to the appropriate members for action in accordance with their respective laws and procedures." It could also ask for reports from members on what action they had taken to implement ITO recommendations and would be able "to conduct studies, to make recommendations concerning uniform national standards, and to call conferences of member states for purposes of general consultation." [8]

Clearly, while the British Government has in principle committed itself to support international cooperation for curbing private cartel arrangements, no more than the United States or any other member of the United Nations has it yet surrendered any part of its sovereignty in the handling of cartel problems. Nor has it subscribed to a definite cartel policy. It has simply accepted the *Proposals* "as a basis for international discussion." It has burned no bridges behind it—indeed, as yet it has not even crossed any bridges.

Two sets of influences will largely determine Britain's policy toward cartels: its trade position (balance of international payments) and the climate of opinion. The first is technical, the second psychological. One is objective, the other subjective. Their interaction will be decisive.

### *Britain's Prewar International Economic Position*

Before World War II Britain was the world's largest importer of primary raw materials and the world's second largest exporter of goods in general. Throughout the nineteenth century Britain ranked first in both categories. For more than a century before 1931, the British bought from foreigners more goods (visible trade items) than they sold to foreigners, chiefly manufactured goods; and even when services are taken into account, imports exceeded exports for more than fifty years. Income from investments abroad was the main credit item that balanced Britain's trade account with foreign countries, that is, offset the deficit of exports. Britain was investment banker to the world. Its foreign investments had for decades steadily

8. *Proposals*, p. 19. The draft charter of ITO agreed on in London incorporated the substance of this part of the *Proposals*. "Restrictive business practices" were condemned, but only where they had "harmful effects." The charter would commit members "to take all possible steps" to prevent such restrictive business practices within their respective jurisdictions. It would also commit each member "to take fullest account of the Organization's findings" in deciding what action it should take in specific cases. See *Report of the First Session, on Trade and Employment*, pp. 34-35.

increased, except briefly during World War I when a sharp curtailment of its exports forced the sale of foreign assets to finance heavy import requirements.

In the interval between World Wars I and II, however, Britain's international financial position deteriorated greatly. World War I increased the country's foreign liabilities and decreased its foreign assets. The war also seriously disturbed customary trading relationships. It hastened the industrialization of relatively backward countries, such as Japan, and these countries entered world markets as British competitors. It created new national states ambitious to develop military strength through industrial power. Autarchic policies flourished; barriers to the free movement of goods multiplied. These developments weakened the position of the British merchant marine and impaired British financial power. Business rivals in the many countries that had devalued their currencies—refused to make them convertible into gold at prewar parities—capitalized their competitive advantage.

*Trade Balance Between the Wars*

As Britain's position in international trade and finance deteriorated, its income available for investment abroad diminished. From 1924 to 1930 inclusive, the British bought on annual average £386 million more of goods abroad than they sold. They had, however, an average annual net income of £241 million from overseas investments, £127 million from shipping, and £61 million from commissions, fees, premiums, and short-term interest. The net income from these sources not only offset the £386 million deficit from commodity trade but provided an average annual balance of £43 million for increasing investments abroad. (See Table 5.)

During 1931–1938 Britain's average annual net income from overseas investments and services failed to cover the difference between the average annual value of its exports and imports. Although the average annual export deficit had shrunk about 13 per cent, to £335 million, net income from overseas investments, shipping, and financial services had shrunk more than 30 per cent, to £297 million, and lacked £38 million of meeting the trade deficit. Thus during the thirties the British drew down their foreign investments on balance —in effect, so far as foreign transactions were concerned, they lived

TABLE 5

MAJOR ITEMS IN BRITISH BALANCE OF PAYMENTS FOR SPECIFIED PERIODS

*(Annual Averages in Millions of Pounds Sterling)*

| Items | 1924–1930 | 1931–1938 | 1924–1938 |
|---|---|---|---|
| Invisible income | 429 | 297 | 359 |
| Net income from overseas investments | 241 | 181 | 209 |
| Net shipping income | 127 | 84 | 104 |
| Short-term interest and commissions | 61 | 32 | 46 |
| Commodity import surplus (including silver) | 386 | 335 | 358 |
| Average annual surplus (+) or deficit (—) on above items | +43 | —38 | +1 |

*Source: Statistical Abstract of the United Kingdom, 1924–38,* p. 434. Other items in Britain's balance of payments during these years were of minor importance.

off their capital—something they had not done in peacetime for more than a century.

The decline in the actual export of British capital had many causes.[9] Less favorable terms of trade were probably one factor in the outcome, but the diminished profitability of foreign investment and a considerable expansion of domestic investment fostered, in part, by Britain's new tariff policy also played a role. The decrease in capital export also reflected a decreasing foreign demand for British goods and services, however, and in so far as this factor was responsible for the radical change in Britain's international balance sheet it portended a drastic decline in the nation's real income.

### *Effect of World War II*

World War II accelerated and intensified the trends World War I had signally marked. For six years after 1939 British exporters were cut off from former markets. Many of Britain's former large customers increased domestic production and thereby became less dependent on British goods. The war brought fundamental changes that seem likely to further reduce British income from overseas investments, from shipping, and from other invisible items.

The war sharply decreased British foreign assets. It increased British foreign liabilities even more sharply. Before the American

9. See Alfred E. Kahn, *Great Britain in the World Economy,* Columbia University Press, New York, 1946, pp. 138-42. This chapter draws heavily on Kahn's penetrating and circumspect analysis of the British economic position.

lend-lease program, the British had to finance their war effort themselves, and even with lend-lease aid they continued to use capital to meet war expenditures. To pay for their foreign purchases from September 1, 1939 to June 30, 1945, they sold foreign investments totalling about $4,500,000,000.[10] During the same period Great Britain bought, largely on credit, about $12 billion of goods and services, primarily to maintain its overseas military forces.[11]

The war, it is clear, greatly decreased Britain's income from overseas investments and greatly increased its obligations to foreigners.[12] At the same time it reduced the earning power of Britain's merchant marine, destroying more than half the prewar tonnage. In spite of new construction, British tonnage on June 30, 1945 was less than three fourths of the prewar figure.[13]

The British are rapidly rebuilding their shipping, but they will encounter stiff competition. While the British were losing ships Americans were building them. At the close of the war American merchant shipping had reached 37 million gross tons, three fifths of the world total. American shipping probably cannot compete unaided with British shipping, but the United States Government is apparently ready to continue its helping hand. The Special Committee on Post-War Economic Policy and Planning of the House of Representatives has stated that the "maintenance of an enlarged merchant marine under our flag is essential for our national security" and has recommended that subsidies be granted to such

10. See the British White Paper (Cmd. 6707) published in connection with the Anglo-American financial agreement, Appendix III, Table 4, reproduced in *Federal Reserve Bulletin,* January 1946, pp. 20-27. Under the lend-lease program, the United States supplied to Britain war materials with an estimated value of $21-$22 billion. As the United States received reciprocal aid amounting to $4-$5 billion, net lend-lease to Great Britain was approximately $17 billion. *Ibid.,* p. 6.

11. These transactions involved for the most part cash expenditures in local currencies and the accumulation by foreign countries of short-term sterling balances. See *ibid.,* pp. 22, 25 (Paragraph 9 and Appendix IV, Table 6). From September 1939 to June 1945 inclusive British net quick external liabilities increased by $11,605,000,000 and gold reserves decreased by $615,000,000. Britain's total net "disinvestment" abroad, including sale of foreign assets, totalled $16,915,000,000. *Ibid.,* p. 26 (Appendix VI, Table 9).

12. The Anglo-American financial agreement recognized Britain's inability either to repay these short-term obligations promptly or to make them freely convertible into nonsterling currencies. Great Britain agreed to seek an understanding with the owners of sterling balances which would provide for (1) immediate release of part of the balance; (2) release of part over a period of years beginning in 1951; (3) readjustment of part of the balance as a "contribution to the settlement of war and postwar indebtedness." *Ibid.,* p. 3.

13. *Ibid.,* p. 24 (Appendix II, Table 3).

shipping as is necessary for the national defense.[14] Whatever else this may portend, it certainly portends embarrassing competition to the British. Moreover, Britain will meet keener competition from other countries which greatly increased their shipping tonnage during the war. It is a safe guess that in the near future the British will carry a smaller proportion of the world's trade than they did before the war.

### *Necessity for Increased Exports*

Confronted with a smaller share of the world's carrying trade and with greatly reduced income from foreign investments and financial services, Britain must greatly increase its exports to maintain the prewar living standard of its people. After allowing for probable declines in other sources of income, the British Government has estimated that to pay for imports in prewar volume the nation must increase exports by about 50 per cent.[15] This estimate made no allowance for the repayment of war and postwar debts, nor did it provide for credits to foreign buyers or for certain overseas expenditures, such as for advertising, that the British must make to recapture and enlarge their foreign markets. The government estimated that to pay for imports in the prewar volume and to cover these supplementary items British industry would have to increase its exports by about 75 per cent.[16] This is a stupendous task. To accomplish it would mean the reversal of a historical trend. For a quarter century before the war several of Britain's more important exports had been losing ground. Of five major items still accounting for 55 per cent of British overseas trade in 1936–1938, exports of three had decreased greatly. Between 1913 and 1938 British textile exports were halved, iron and steel cut by a third, coal by 37 per cent. Only machinery and vehicles held their own.[17]

After the defeat of Japan, the British kept their living standards for the next year and a half close to the "austerity" levels of the war period by continuing the rigorous controls established during

14. *Post-War Foreign Economic Policy of the United States,* Sixth Report of the House Special Committee on Post-War Economic Policy and Planning, 79th Cong., 1st sess., Washington, 1945, p. 9.
15. *Federal Reserve Bulletin,* January 1946, p. 22 (Paragraph 11).
16. *Ibid.,* p. 23 (Paragraph 12).
17. *The Economist* (London), March 9, 1946, p. 380.

the war. This made it possible to direct a large part of their industrial output into world markets. The increase in exports in the first six months of 1946 surpassed the most optimistic estimates. British exports doubled (from the abnormally low levels of the war) within a year after the war's close. Only the wisdom and determination of the government and the self-discipline of the people made this achievement possible.

The British sent their meatier bones abroad, while keeping their home cupboards bare. With a world shortage of goods, they readily found buyers at high prices for all they could ship abroad. These conditions could not persist indefinitely. Pent-up foreign demand will eventually be satisfied, and the British will not want to continue tightening their belts year after year. The coal crisis, bitter weather, and floods in the early months of 1947 drastically curtailed British exports, required unforeseen heavy drafts on Britain's dollar credits, and reduced living standards so sharply as to imperil the public health.[18] The White Paper on Britain's economic position, published late in February at the height of the coal crisis, revealed the government's deep concern over the adverse turn of events.

Furthermore, under extraordinarily favorable circumstances the British had by May 1946 merely brought their exports up to the prewar volume. The monthly average trade deficit (excess of imports over exports) from January to May 1946 was £30,800,000. Although this was considerably less than the £37,400,000 monthly average for 1938, the deficit was still too large for the invisible items (of which shipping services are the most important) to bring Britain's international payments into balance. Thus the country was going further into debt despite its great and strikingly successful efforts to expand exports. *The Economist* estimated that, at prevailing price levels, to "pay her way" Britain must double the rate of exports reached in the first six months of 1946.[19] The British still must "export or expire."

18. "When the Dollars Run Out," *ibid.*, April 5, 1947, p. 504; "Britain's External Account," April 19, 1947, p. 597; and "Britain's Larder," May 17, 1947, p. 770.

19. August 3, 1946, p. 181. In the first six months of 1947 Great Britain drew more rapidly on her dollar balances than had been expected. The coal crisis retarded production and exports, and rising prices throughout the world increased greatly the cost of imports. This further unbalanced Britain's balance of payments. When under the terms of the American loan, Britain made pounds freely convertible into dollars in the summer of 1947, a flight from the pound took place. In the single week ending

*Choice Between Imperial and World Economy*

Britain has two choices in its effort to balance its international accounts without depreciating the pound sterling or still further increasing its foreign debts. It can develop an imperial economy of which the core would be the British Commonwealth of Nations. This course would involve an extension of the system of imperial preferences and bilateral commercial treaties with countries outside the Empire. In building such a system Britain could effectively use its power as the world's largest importer. Or Britain can cooperate with the United States in trying to reduce public and private trade barriers, increase trade, and stabilize national currencies multilaterally.

In negotiating the recent American loan Britain elected, for the time being at any rate, to endorse the latter policy. Whether it will continue to support this policy doubtless depends partly on the course of world trade within the next few years and Britain's relative share in it. While the experiment is under way Britain apparently has much to gain from backing the program without reservation.[20] An all around reduction of trade barriers would tend to increase the volume of international trade. The British task is not only to make this achievement easier but to capture a larger part of world trade. In short, the British must increase the total value of their exports as compared with their imports. To do this they must rely on their business ingenuity, their managerial efficiency, their manufacturing skills, their ability to establish harmonious industrial relations—in short, on their ability to reduce costs and improve products. They must avoid control schemes that would limit their share in world markets or turn the terms of trade against them.

*Cartels as Limitation on Trade Expansion*

To get a larger share of world trade Britain can scarcely afford to bind its traders with quota schemes that limit their share. In appor-

August 18 the British drew $237 million against the loan. By the end of August only $400 million remained. In this crisis, after consultation with the State Department, the British Government ended the free exchange of pounds for dollars. See *ibid.*, August 16, 1947, pp. 288-89; and *Monthly Letter*, National City Bank, New York, September 1947, pp. 99-103.

20. This of course assumes that the United States will support it with equal vigor. See text following.

tioning markets, cartels customarily establish quotas on the basis of members' relative sales during some base period. Bargaining generally leads to selection of a base period favorable to vested interests. In negotiating international commodity agreements representatives of other countries would probably not voluntarily reduce the share of their nationals in world markets merely to promote British interests. Nor in private cartel negotiations are national business groups of other countries likely to surrender markets to British businessmen merely because Britain needs to increase its exports.

*The Economist* has put it this way:

> . . . such a plan [cartelization of world trade] would, if it worked at all, stereotype the present pattern of trade for all time and prevent that buoyant development of new opportunities in which is the chief hope for rising world prosperity . . . how can an agreed sharing of the market possibly meet the requirements of a country that is forced to expand its exports by 50 or 60 per cent? . . . It is a phantasy to suppose that markets can for long be allocated by an agreement which ignores the facts of competitive relationships. As has been remarked in *The Economist* on an earlier occasion, "the producer who could extend his sales in open competition will be just as insistent on a larger share as the best-armed brigand at a robber's share-out." If Britain is in a strong competitive position the World Trade Alliance is unnecessary. If Britain is in a weak competitive position, it would work, if at all, to our disadvantage.[21]

To increase their share of world trade, British producers must increase their efficiency, lower their costs, and offer their goods at attractive prices. They must rely on their ability to sell in competition with other sellers. If the leading industrial nations can manage to achieve a high level of national income and employment, the British task will be greatly simplified. As the volume of British exports is small in comparison with the aggregate of goods sold in world markets, demand for them should expand rapidly in response to relatively small price reductions.

### *Character of British Trade*

The kinds of goods British producers offer for export will determine in part their chances of capturing a larger share of world trade. A scarcity of mine labor and low productivity will prevent any considerable increase in coal exports. Despite the disappearance,

21. "The Principles of Trade—II," January 8, 1944, p. 33.

perhaps only temporary, of Japanese textiles from world markets, the widespread development of textile manufacture elsewhere will probably prevent any great and persistent increase of textile exports. By re-equipping and modernizing its iron and steel industry and by concentrating on the production of the more highly finished products, Britain has a good prospect of capturing new markets and increasing its share in an expanding trade.

But Britain will have to look primarily to machinery and vehicles, hardware and household appliances, plastics, chemicals, and drugs for the greater part of any increase in exports. As judged by the nature of the demand, these products fall into two broad groups: heavy goods, the demand for which should grow as backward countries are industrialized; and goods of the semiluxury class, for which demand increases rapidly in the wake of full employment, high incomes, and rising living standards. The industrialization of backward regions seems likely to take place slowly. For the near future the prospects are better for a growing demand for semiluxury goods in economically well-developed countries. These semiluxury goods are the ones for which people spend more as their incomes rise. To balance its international payments without reducing living standards at home or increasing its foreign debts, Britain must concentrate on the export of this class of goods.

But to adapt themselves to changing consumer habits as incomes rise, the British must also keep their industrial system flexible. Labor must be mobile, businessmen resilient. British manufacturers must grasp the opportunities of the future, not shackle themselves to the past. Competition will not guarantee Britain a larger share in world trade, of course, but it will at least give British traders a chance to capture a larger share.

*Commodity Agreements and British Terms of Trade*

Just as Britain can scarcely afford to shackle itself by control schemes that would limit its share of world markets for finished and semifinished goods, so it can scarcely afford to encourage commodity control schemes that would raise the prices of the primary commodities on which its people and its factories feed. British imports consist largely of foodstuffs and industrial raw materials, and achieving independence in either of these classes of goods is out of

the question. As British exports increase or British living standards rise, imports must increase; but because the skill of British labor and the efficiency of British machines greatly increase the value of the raw materials they convert into manufactured goods, increasing exports need not involve a proportionate increase of imports.

Changes in the relative prices of raw materials and manufactured products might, however, turn the terms of trade against Britain. If commodity prices were to rise more rapidly than the prices of manufactured goods or fall less rapidly, the British would be obliged to give up a larger volume of manufactured goods to pay for their imports. Relatively low commodity prices would make it easier for Britain to balance its imports by its exports.

Unless producers with the aid of their governments intervene to prevent it, prices of raw materials and foodstuffs will probably fall. The war enormously increased world capacity for producing primary commodities. In 1944 the United States produced a volume of agricultural products larger by 33 per cent than its 1935–1939 average annual output.[22] Its 1945 farm output was almost as large and preliminary estimates indicate that 1946 output broke all records.[23] Mechanization and improvements in farming techniques have made these gains possible. Less labor has produced more farm products. As improved techniques are adopted elsewhere and domestic tranquillity returns to such countries as China, India, and Burma, world agricultural output should increase and costs and prices should decline. Similar developments in the production of other basic raw materials should force prices down over the long run.

These developments are likely to heighten the clamor for private cartels or for government-sponsored commodity agreements. Such arrangements are unlikely to yield Britain a net gain. As the country depends on foreign sources for many of its raw materials, it must export more to pay for its imports if raw materials prices increase relative to those of manufactured goods. A relatively slight deterioration in the terms of trade might substantially increase the trade deficit.

22. *Statistical Abstract of the United States, 1944-45,* Department of Commerce, Washington, 1946, p. 653.

23. "1945 Annual Summary," *Crop Production* (Bureau of Agricultural Economics), December 18, 1945, p. 4, and September 10, 1946, p. 4.

From the British point of view control schemes would not, of course, be an unmixed evil. Particular control schemes—for example, a rubber restriction program—might increase Britain's supply of foreign currencies and also increase the return on British foreign or colonial investments out of which to meet its obligations abroad. The British might gain substantially if control schemes were limited to those commodities that British-owned enterprises largely produce. But it is unlikely that Britain can pick and choose, and it does not stand to gain from a comprehensive system of international commodity agreements that would raise the prices of primary commodities generally above competitive levels. If it supports control schemes that will help to raise the prices of commodities it sells, it must tolerate control schemes that will make British imports more costly. Apparently Britain would do well to resist both.

The British need cheap imports. They also need to enlarge their share of world exports. Commodity agreements, by raising the prices of primary commodities (British imports), and cartels, by limiting sales of manufactured goods (British exports), run counter to these needs if past experience is a reliable guide.

### *British Opinion and British Policy*

It does not follow, however, that Britain will wholeheartedly support an anticartel program. Britain's international interests are a composite of the conflicting interests of different groups and classes. Some producers may gain, in the short run at any rate, from restrictive control schemes. British policy is more likely to reflect the interests of articulate minority groups than those of the mute mass of consumers. Moreover, there is nothing either good or bad but thinking makes it so, and the British are not single-minded on this issue.

Largely under the leadership of prominent industrialists, and frequently with government help, British industry has deviated sharply from the pattern of free competition. Before World War II self-government in industry had become the general rule of economic organization. When the British abandoned free trade they gave up their most effective weapon against private monopoly. The subsequent concentration of economic power has won the support of leaders with radically different viewpoints. Socialists and conservatives alike have given it their blessing, but for different reasons.

British industrialists are for the most part firm believers in industrial self-government, while most trade-union leaders—including Labor Party chieftains—regard concentration of economic power as a necessary step toward socialization of industry. Abandonment of free markets is a basic tenet of both groups.

Although a Labor Government is now in the saddle and riding hard toward socialist goals, business leaders have not abandoned hope of recapturing the reins. Meanwhile their influence in shaping business practice in the nonsocialized fields will remain great. What they think and what they do about cartels will appreciably affect the chances for success of an American program directed to curbing them.

Fortunately they have set down what they think about cartels and outlined what they would like to do. A recognized leader of the self-government-in-industry movement in Great Britain is Lord McGowan. A member of the House of Lords, influential in the Conservative Party, a writer and speaker of some distinction, and one of the two principal organizers of Britain's greatest industrial combine, Imperial Chemical Industries, Ltd., Lord McGowan speaks on cartels and competition with an authoritative voice. In mid-1944 while debating the subject before the House of Lords, he said:

> In this country, many manufacturers have ceased to believe in the inherent superiority of *free* or *extreme* competition . . .
>
> The purpose of [cartel] agreements is, in the main, to regulate but not to abolish competition. Such agreements can lead to a more ordered organization of production and can check wasteful and excessive competition. They can help to stabilize prices at a *reasonable* level . . . They can lead to a rapid improvement in technique and a reduction in costs, which in turn, with enlightened administration of industry, can provide the basis of lower prices to consumers. They can spread the benefits of inventions from one country to another by exchanging research results, by the cross-licensing of patents, and by the provision of the important 'know-how' in the working of these patents. They can provide a medium for the *orderly* expansion of world trade and can make a substantial contribution—and this is important—to the difficult problems of the postwar readjustment of production in countries greatly affected by the war. They can assist in providing much greater stability of employment . . .
>
> It is stated by some writers that cartels are designed to or have the effect of restricting production in order to keep up unduly high selling prices . . . I think . . . this general statement is inclined to distort public opinion. I do

not believe that this contention is of general application, though isolated cases may exist.[24]

A year earlier, in an article in *The Sunday Times,* he characterized competition as an outworn institution:

Large businesses have in the past been built on the foundations of unrestricted competition, but this is no longer a method which generally commends itself. It belongs to an age when men could imagine no other way to progress than at the expense of others. . . . There are few today who would recommend a return to unrestricted competition as the *basis* for our economy . . . The alternative is . . . cooperation and agreement.[25]

This is the unofficial voice of British industry.[26] Its self-acknowledged official spokesman, the Federation of British Industries, advocates a complete cartelization of domestic industry and international trade.[27]

### *Federation of British Industries Supports a Cartel Program*

According to the Federation:

. . . the free play of market forces cannot be relied on to establish equilibrium in international trade automatically . . . The choice seems to be between returning to the jungle law of unregulated competition or to adopt the more modern and realistic view . . . that this jungle law should be replaced by planning designed to raise world prosperity by orderly methods . . .

This will necessitate the creation of an International Economic Council, the nucleus of which might be found in the existing collaboration between the United Nations. Such a Council could: (1) do useful work in estimating . . . the requirements and possibilities of supply of the different countries in the principal commodities of international trade; (2) guide international trade into the channels where it would be most beneficial to both producer and consumer; (3) act as the co-ordinating body . . . for the purpose of raising . . . [the] standard of life [in countries needing assistance] or expanding their industrial and commercial activities.[28]

24. *Parliamentary Debates* (Hansard), House of Lords, July 3, 1944, cols. 683-84. Italics supplied.

25. "Combines and Cartels," *The Sunday Times* (London), July 25, 1943, p. 4. Italics in original.

26. *The Statist* praised Lord McGowan for his "timely excursus into elementary economics" and echoed his ideas as follows: "Unless the big unit exists to handle and direct the spate of production which the machines make possible . . . the whole human race will be swamped by its own productivity." "Combinations, Cartels, and the Mass Mind," July 31, 1943, p. 557.

27. The Federation has proclaimed itself "the largest association of manufacturers in the world . . . accepted by Government, Press and Public as the authoritative voice of British Industry." Robert A. Brady, *Business as a System of Power,* Columbia University Press, New York, 1942, p. 160.

28. *International Trade Policy,* Federation of British Industries, London, February 1944, pp. 6, 12.

Though governments will have a hand in this planning, private industry will play the major role, for "the action of the Government should . . . be limited to such general guidance as may avoid anti-social, wasteful, and chaotic conditions." International cooperation in regulating trade is primarily the problem of organized industry. The mechanism of control is the cartel. What is called for is:

. . . a series of agreements . . . dealing individually with the main materials entering into international trade . . . arrangements with regard to . . . manufactured goods . . . may present greater difficulties . . . industries should . . . investigate the problem . . . with a view to deciding on the desirability and possibility of negotiating international arrangements with similar industries in other countries . . .[29]

Just as private cartels are to coordinate and regulate international markets, trade associations and other private industrial organizations are to regulate domestic markets.[30] The Federation believes that the organization and control of domestic markets by private trade groups is essential to prevent governmental control.

Unless industry itself takes steps, where it has not already done so, to provide a suitable organization, the Government may find itself compelled by the pressure of circumstances to devise channels of administration of its own . . .

The Federation contemplates that the government will delegate administrative responsibilities to organized business groups and content itself with a consultative role.

The practical solution would be for industry to provide associations with collective representation and responsibility to which the Government could delegate the detailed work involved . . .

The need . . . is for associations capable of formulating general production and commercial policies for the sections of industry which they cover, in consultation with the Government . . .[31]

Under the Federation's program, trade associations would act as the official channels of communication between government administrators and industry. Each would serve as a unit for bargaining with foreign industries, and for cooperating with other local industries.

29. *Ibid.*, p. 15.
30. *The Organization of British Industry,* Report of the F.B.I. Organization of Industry Committee, *idem,* London, October 1944.
31. *Ibid.*, pp. 5-7.

They would maintain codes of trade practices, gather trade statistics, promote exports, conduct sales propaganda, encourage research, set up uniform cost-accounting systems, promote the interchange of technical information, and on occasion allocate quotas and even fix prices. In the language of the Federation, they would "assist in solving problems that arise when production and consumption get out of step or are subject to dislocations caused by trade cycle fluctuations." [32]

*British Industrialists Offer a Program*

The propaganda of other business groups indicates that the Federation's cartel program expresses the sentiment of a large portion of British industry.[33] A group of 120 leading British industrialists has independently published *A National Policy for Industry.*[34] They, too, reject competition as a regulator of industrial activity and look to organized business groups to establish a centralized control over the British economy and, with similar groups in other nations, over the world economy.

> It appears to us . . . to be an essential condition of progress that *the relations between firms, between different industries and between Industry as a whole and Government should be more fully and comprehensively organized in some form of permanent association.* Otherwise there will continue to be loss and friction through forms of competition which are wasteful and uneconomic . . .[35]

While they state their aspirations somewhat broadly and vaguely,[36]

32. *Ibid.*, pp. 7-8.

33. On the Federation's role in British industry Brady (*op. cit.*, p. 188) comments as follows: "As policy coordinator for this swiftly unfolding and cartel-like apparatus of trade associations, given an added fillip for more rapid extension of their powers and influence in the current national emergency, the Federation of British Industries takes on a new and far-reaching significance. Commanded at the top by a small coterie of officials who are drawn chiefly from large concerns or from concerns under the influence or control of the giants in their respective fields, and with both officials and controlling concerns bound together by an infinity of interconnections—personal, family, and institutional—into a tightly meshed business oligarchy vested with political powers of propaganda and coercion, this is the British pattern in the making . . ."

34. Published in London in November 1942, the report carries the signature of A. R. Smith, Secretary.

35. *Ibid.*, p. 14. The italicized portion is in bold type in the original.

36. The sponsors of this program propose to organize industry into sectional associations, and together with the Trades Union Congress to elect a Central Council of Industry representing all industry, which would formulate over-all policy. They express the hope that Parliament will compel every business concern to join the appropriate association and authorize sanctions for enforcement of association orders. To safeguard consumer interests, they propose that the decisions of the Central Council be subject to review by an industrial tribunal appointed by the government.

these British industrialists look to the familiar devices of amalgamation, trade association, and the cartel as the leading instruments of trade control. Though not unmindful of their evil potentialities, to each they give their blessing.[37]

> Properly administered amalgamations, commanding the services of technical, commercial and financial experts and consultants, provide in our view a more effective spur to efficiency than unchecked competition, which leads often to uneconomic investment and production and the final closing down of businesses through unprofitable trading, with all that this involves in displacement of labor. In general industrial amalgamations have not taken unfair advantage of their position. When based on sound lines and well managed, they have been of great benefit to the consumer by using their larger financial resources to pursue an active research and development policy, thus enlarging business both at home and abroad . . .
>
> Trade associations play an important part in introducing a spirit of cooperation between those engaged in the same field, regulating conditions of trade, and eradicating unfair trade practices . . .

Of cartels their praise is even more emphatic.

> Cartels differ from Trade Associations in that they are international in scope. Where similar products are manufactured in different countries, these international agreements (which necessarily imply that the parties to them are able to speak for the major share of the industry concerned) are essential to keep production equitably allocated between countries and companies in line with the maximum world demand attainable. They exercise a stabilizing influence against violent fluctuations and dislocating shifts of the currents of trade, and thus have an essential part to play in postwar reconstruction, when international economic cooperation for the general benefit will be of the highest importance.

The sponsors of this plan are not reluctant to have businessmen assume control of the British economy. They recognize the social responsibility which the assumption of such power would place on them. But they are prepared to discharge it.

> The responsibility of those directing industry is to hold a just balance between the varying interests of the public as consumers, the staff and workmen as employees, and the stockholders as investors, and to make the highest possible contribution to the well being of the nation as a whole.[38]

Sir Edgar R. Jones, a leading figure in the British iron and steel industry, has advanced an even more grandiose scheme for the

37. *Ibid.*, pp. 12-13.
38. *Ibid.*, p. 5.

cartelization of world trade. His proposal for a World Trade Alliance takes on a deeper significance because it "received the blessing of the General Council of the Trades Union Congress and the sympathy of the Federation of British Industries." [39]

Although these expressions of opinion indicate the trend of thought among leaders of British industry, not all politically articulate Britons who reject socialism are of the same persuasion. Some members of the Conservative Party show a keen appreciation of what would be required for a genuine reconstruction of the British economy enabling it to restore British power and prosperity. The Tory Reform Committee declares that what Britain needs

> . . . is expansion upon a scale comparable to that which took place in this country and America during the industrial revolution. The robust and sanguine philosophy of expansion is far removed from an attitude of complacency. It postulates a recognition that almost everything was wrong with our prewar outlook and its legacy of out-of-date methods and equipment. We have a skillful working population, great resources and high technical ability. . . . No individual or sectional efforts will avail unless successive governments keep the goal constantly before the eyes of the people, wage relentless war against the anti-social policies of restriction and provide an enterprising direction to our economic strategy. . . . twenty years of extreme difficulty have left a general taint of slump-mindedness, hard to eradicate, amongst British businessmen. . . . As if by second nature, our industries are looking to the refurbishing of trade associations and price fixing arrangements in case the worst befalls . . . these activities can be most inimical to expansion, and at the present time the emphasis should be far more on the restoration of competition than on the fortification of controls.[40]

In spite of the Tory Reform Committee's dissent, most British industrial leaders are friendly to the cartelization of world trade. While their plans for self-government in industry went somewhat awry when the Labor Party came into power, these plans are more than straws in the wind. They reveal a deep conviction that competition is no longer an acceptable instrument for regulating industry

39. *Manchester Guardian,* February 8, 1944. The plan was to broaden and unify the cartel system so as to make the World Trade Alliance the sole regulator of all international trade. Each industry would be organized first on a national basis and then on an international basis, with the power to fix output and prices and regulate the flow of trade. Although the plan provided for supervision by intergovernmental agencies, the contemplated Alliance was one of businessmen rather than of bureaucrats. See also *The Economist* (London), July 24, 1943, p. 105.

40. *Tools for the Next Job,* Tory Reform Committee, Europa Publications, London, 1945, *passim.*

and trade. They indicate that the spirit of Düsseldorf has outlived the war. *The Times* (London) probably reflected the prevailing sentiment among British industrial leaders when it characterized the World Trade Alliance as offering "a means by which organized cooperation can take the place of unregulated competition for markets without taking the trade out of the hands of those who have hitherto directed it." [41]

### *Decentralization of Industrial Power and the Socialist Program*

By shifting the control of industry from the market to private combines and cartels, British business leaders paved the way for Labor's program of nationalization. The British political upheaval indicates that democratic societies are not prepared to tolerate a system of private monopolies. If enterprise is to remain private, it must remain free. If businessmen are not prepared to accept the risks of business enterprise, they can scarcely expect to remain exempt from public control. The Labor Party's policy toward centralization of private economic power is influenced in part by the belief of many of its members in the socialistic state. As centralization of power is a necessary step in the socialization of industry, socialists have not generally fought it. To socialists centralization is a drift toward better things.

British socialists recognize the evils of private monopoly, of course, and they propose to do something about it. At the annual convention of the Labor Party in 1944, Emanuel Shinwell, later Minister of Fuel and Power, expressed a moderate socialist attitude. He declared:

> If a monopolistic undertaking exercises its prerogative and maintains a high price level . . . or . . . if it "corners" a commodity against other manufacturers or against the community, or employs any other vicious device which is against the public well-being, control must be exercised and it must be effective control. Further, if a monopolistic undertaking has reached that economic position where the commodity it produces or over which it has power is indispensable to the life of the community, that monopolistic undertaking must be taken over by the State in the interests of the community. . . . The one essential factor is . . . that the power of exploitation,

41. July 20, 1943, p. 5.

the power of unwise direction of our resources must be taken out of the hands of those whose primary concern is private gain.[42]

For the most part, members of the Labor Government are skeptical that governments can break up great financial consolidations into their constituent parts and enforce competition. In their view private monopolies must be either socialized or regulated. The Minister of Civil Aviation, Lord Nathan, forcefully expressed this viewpoint in a debate on cartel policy in the House of Lords on March 1, 1945.

> The regime of competitive enterprise is on its deathbed, not because of Government interference but because of the concentration of manufacturing power in the uncontrolled hands of a few and because of the rigging and closing of open markets by irresponsible monopolists. Right and Left are alike alarmed and dismayed by the surreptitious disappearance of the safeguards and sanctions of the old system of competitive enterprise, without its replacement by any conscious regime of public direction and supervision in the public interest. . . . What I ask is not that the pages of history be turned back, but that all steps shall be taken, must be taken, on behalf of the community *to prevent the abuse of the power* which is thereby given to the "over-mighty subjects" in our midst.[43]

Even such a moderate socialist as Herbert Morrison has put it this way:

> . . . the only genuinely satisfactory course in some of these instances of monopoly is to socialize them and, I would add, to run them on the lines of a public corporation. In other cases we may be led to find methods of effective management and operation in the public interest without socializing the whole undertaking, at any rate at the outset . . . But . . . the right thing to do in some of these cases may be to enforce competition by legal change . . .[44]

The Labor Government will scarcely tolerate unregulated private monopoly. But it probably will not try to re-establish competition through an antitrust program. It is more likely to accept concentration of economic power as inevitable and to regulate or nationalize those industries in which private collective controls have replaced free markets.

42. *Report of the Forty-third Annual Conference of the Labour Party,* London, 1944, p. 162.

43. *Parliamentary Debates* (Hansard), House of Lords, 5th Series, col. 694.

44. *Prospects and Policies,* Knopf, New York, 1944, pp. 71-72. In advocating a program akin to American antitrust policy, Mr. Morrison may not have the unqualified support of all his Cabinet colleagues.

*Labor Party's Cartel Program*

British Labor's attitude toward international cartels is less clear than its attitude toward domestic monopoly. During the war, Labor opposition was confined largely to domestic affairs. Foreign economic policy came in for secondary consideration. Since the war the return of a Labor majority in Parliament has radically altered the situation. On the one hand, it has fostered a more aggressive mood in Labor's rank and file and to some extent this new outlook is reflected among the Party leaders; opportunity has knocked at the door and men who have long harbored visions of a new day do not mean to let it pass by. On the other hand, with power goes responsibility, and responsibility, leading to a reappraisal of time-tested relations and familiar arrangements, may temper judgment.

The Labor Party's economic policy since the British electorate placed it in power has reflected these partly contradictory promptings—to act and to be cautious; to advance, yet to go slowly. In general, caution has had the upper hand in molding foreign policy; action, in molding domestic policy. Britain's Labor Government has shown a steady determination to cooperate with the United States, not alone in the settlement of the war but also in shaping the peace-that-is-to-be and the economic world of the future. Conversely, it has shown no disposition to align itself closely with Russia, though from the standpoint of socialist ideology the Soviet Government might be a more natural ally.

On the domestic front the Labor Government has proceeded vigorously to carry out the Party program of nationalization of industry.[45] It has not allowed zeal for collaboration with America to interfere with action on its commitment to underwrite full employment. It has continued, even extended, wartime economic controls. These developments do not point toward abandonment of controls in the international field. While the British Government has endorsed the proposals of the United States Department of State for removing public and private restrictions on international trade, it has not committed itself to the details of such a program.[46]

45. See "Second Session," *The Economist* (London), November 16, 1946, p. 777; and "Second Reading," December 21, 1946, p. 985. The Labor Government has even extended the nationalization program to embrace certain branches of foreign trade, for example cotton and cocoa, in addition to basic industries like coal and transport.

46. Many influential members of the Labor Party believe that effective international

Many British business leaders of the right and labor leaders of the left apparently believe that the State Department's anticartel policy is designed primarily to promote the interests of American business. The war greatly increased the productive capacity of the United States and accelerated the development of industrial technology, and they expect American business leaders to look to foreign markets to take up the slack when war-accumulated domestic demands have been met. They fear our competition and distrust our motives. The British are skeptical of the recrudescence of American sentiment for free enterprise and free competition—principles Americans preach more than they practice. They point to the failure of the Sherman Act to stem the decline of competition in the United States and in particular to its failure to break up the giant corporate combinations that dominate many branches of American industry. They suspect that American Big Business, with a secure hold on its home markets, may have its tongue in its cheek when it gives an approving nod to the State Department's advocacy of free competition for foreign markets. Moreover, the British have grave doubts that

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collaboration on foreign trade requires an abandonment of competition. Sir Stafford Cripps, while Minister of Aircraft Production in 1944, declared that a return to open competition in world markets would lead to another and more disastrous war and urged that Great Britain take the lead in international cooperation. See dispatch in the *New York Herald Tribune,* September 18, 1944.

Aneurin Bevan, speaking for the government in a full-dress debate on economic policy in the summer of 1945, vigorously condemned private cartels. The Minister of Health stated that "The steel industry of this country has been petrified at an output of 12,000,000 tons of steel per annum . . . We have, owing to the cartel, been reduced to the status of an inefficient country . . . That is why we want to break the cartel. Fortunes are being made in this country by people because they do not produce goods. It is obvious to everybody . . . that there is no possibility of extending the standard of livelihood for the people of Great Britain until we break the cartels and trusts in which British industry is being destroyed." Mr. Bevan did not contemplate a competitive control of international markets, however. He said: "We are not against the unification of the basic industries. On the contrary, we are in favor of it. We do not want to maintain internecine competition in these industries, because we know very well what that means. We are in favor of a policy of international agreements, but we desire to see unification brought under public control because we know very well that, if these cartel agreements which are being made between this country and other countries are under private control, they will not be used for the public benefit . . ." *Parliamentary Debates* (Hansard), House of Commons, 5th Series, June 15, 1945, cols. 719-20.

Obviously, knotty problems would confront a government that pushed nationalization of its domestic industries beyond the field of public utilities and at the same time subscribed to an anticartel policy in international trade. Suppose Britain were to nationalize its chemical industries. Would Argentina and Brazil allow the British Government, taking the place of ICI as a partner of du Pont in the Duperial companies, to determine how much soda ash and how much cellophane Argentine and Brazilian consumers could buy and at what prices?

the United States can and will stabilize its economy at a high level of employment and income and they fear that surplus capacity will lead to ruthless price wars in unregulated world markets.

*Liberal Party's Program*

Neither the Tory program nor that of British Labor promises much to free enterprise. Only the Liberal Party, shrunk to a mere skeleton of its former self, openly espouses the virtues of free trade, free markets, and free competition. The Party has stated its position succinctly:

> Things are best made where they are most easily and cheaply made. All restraints on trade, whether by cartel, international agreement or the erection of trade barriers are bad . . .[47]

A leading Liberal organ has proclaimed with equal clarity the need of British industry for flexibility if it is to meet its postwar opportunity and challenge:

> The adaptation will need great enterprise. Any illusion that we might, after all, persuade others to take what we wish to produce rather than what they wish to buy is bound to weaken the determination to change . . . By all means let us seek international agreement on a mechanism of exchanges, investment, and commercial policy designed to promote trade expansion. By all means let us devise international means of evening out extensive fluctuations in price and demand. But in a moving world we can no more stop demand from changing than we can stop a tree from growing, or, at any rate only by the same means.[48]

But the Liberal Party is a voice crying in the wilderness. It stands alone and forsaken. In the language of *The Economist:* "What is frightening to the [British Liberal] is the extent to which these ideas [that competition is bad] have been accepted by British business and British labour."[49]

47. "The Six Points of Liberalism," a political leaflet without acknowledged authorship, place, or date of publication. The Liberal Party believes that regulating cartels and trusts may in some instances be preferable to dissolving them. In the platform adopted at its 1945 meeting (February 1-3), the Party Assembly advocated:

"Strengthening of the law governing the restraint of trade; effective control of such monopolies and cartels as are found to be necessary in the public interest; effective supervision of trade associations in order to check the growing tendency towards monopoly and to protect consumers against exploitation or inefficiency.

"Extension of the public sector of industry where this is required for special reasons such as the need to control monopolies . . ." *Liberal Policy,* Liberal Party Organization, London, 1945, p. 8.

48. *Manchester Guardian,* February 8, 1944.

49. "Principles of Trade—II," January 8, 1944, p. 33.

British subjects of all classes have more confidence in the ability of ruling groups to plan their economic destiny than have most Americans. While they differ sharply on where the control of British industry should rest, the majority apparently agree on the need for its deliberate, centralized control. Before the Labor Party victory in 1945 business leaders looked to a closer union between private business and a Conservative Government, with private business collectively administering actual controls and counselling the government in the exercise of its nominal controls. Now they look to the eventual collapse of the Labor Government and to ultimate resumption of their role as industrial bureaucrats. If their hopes should be realized, the private cartelization of British industry would be assured. If their hopes should be blasted, the scope of Labor's nationalization program would undoubtedly expand.

The State Department's program for freeing international trade from either privately or publicly administered controls cannot easily be assimilated to the social philosophy and political goals of either British Conservatives or British Labor. British cooperation is essential to the success of the American program, although it does not guarantee its success. In its avowed allegiance to the organization of world trade on a competitive basis America faces the risk of eventually standing alone.

### *Attitude of Other European Countries*

Other European countries are even less likely than Great Britain to support the anticartel program the United States has sponsored. Some economists regarded the defeat of Germany as an opportunity to reorganize European industry on a pattern of free enterprise. Indeed, it is the avowed purpose of military government in the American zone of occupation to free German industry from the domination of cartels and combines.[50] But a project of atomizing German industry is not likely to succeed.

Given a proper environment, free competition is a hardy plant; but its climatic tolerance is low. Indigenous to American and British nineteenth-century culture, it has found the going tough when trans-

50. For text of the decartelization law promulgated on February 12, 1947 for American and British zones of Germany, see Department of State Press Release No. 154, February 27, 1947.

Zaibatsu in their program of controlling markets. Zaibatsu control of credit and raw materials aided them in stifling competition.

American policy contemplates the dissolution of the Zaibatsu and the reorganization of Japanese industry on a competitive pattern.[54] But regardless of how long American military forces remain in Japan, the prospects for permanent democratization of the Japanese people and a reshaping of Japanese industry on an American model are not bright. Japanese political and economic salvation will rest with the Japanese. The Allied powers may break the economic molds and sever the institutional thongs that have bound the Japanese people, but they cannot determine the shape of things to come. When their conquerors have gone the Japanese are unlikely to enforce imported antitrust laws, or to conduct their business as their departing conquerors would have them. The Zaibatsu may be crushed, but in their efforts to rise from the ruins the Japanese may resort to some other sort of collective action.

### *Anticartel Policy and Multilateral Trade Agreements*

The State Department's program for curbing cartels is related to its program for reducing tariffs, eliminating discriminatory trade agreements, and opening up world markets to multilateral trade. It might obtain wide agreement to lower the barriers to world trade outside of Russia, without getting international collaboration to curb private cartels. But success in an anticartel program is inconceivable without a general agreement to reduce trade barriers. Current indications point to stiff resistance even to the State Department's multilateral trade program.

54. The basic directive issued to General MacArthur on September 6, 1945 specifically declared that "it shall be the policy of the Supreme Commander . . . to favor a program for the dissolution of the large industrial and banking combinations which have exercised control of a large part of Japan's trade and industry." *Ibid.*, p. 9.

According to a Tokyo dispatch reported in the *New York Times* (September 2, 1946, p. 6), formal dissolution for the Zaibatsu was set for September 30, 1946. On that date the Zaibatsu concerns were to transfer the stock they held in subsidiary companies to the Japanese Government's Liquidation Commission for eventual sale to the public. Stock was also to be offered to the employees of the several constituent concerns. The program covered 91 Mitsui corporations with an aggregate capital of 3,880,000,000 yen; 38 Mitsubishi corporations with an aggregate capital of 2,767,000,000 yen; 31 Sumitomo corporations with a capital of 1,666,000,000 yen; 29 Yasuda corporations with a capital of 641,000,000 yen and 66 corporations in the Fuji Industrial group (primarily manufacturers of aircraft and other war materials whose activities the war greatly expanded). The 255 companies, with a total capital of 8,445,000,000 yen, represented about half the aggregate capital of the 1,200 concerns the Allied governments have designated, as Zaibatsu, for liquidation.

For example, in the recently negotiated Swedish-Russian trade treaty Sweden undertook to lend the Soviet Union the equivalent of $278 million for the purchase of Swedish goods over a five-year period. In the State Department's view, this treaty will result in Sweden's allocating "specified quantities of Swedish exports to the U.S.S.R. irrespective of superior commercial opportunities which may develop in other countries." [55]

The State Department apparently regards such bilateral agreements as conflicting with its program for reduction of the barriers to multilateral trade. In its note of protest it expressed the hope that Sweden "will conform to the basic principles of these proposals in its trade agreements and will avoid entering into any agreement" which may conflict with the aims of the proposed world trade organization.[56] Sweden in reply reiterated its adherence to the principle of multilateral, nondiscriminatory trade agreements, but reserved "to itself complete freedom of decision as to the opportuneness of concluding such bilateral agreements as well as of adhering to an eventual international arrangement." [57]

The Soviet Union's reply to a similar protest from the American Government was sharper. Moscow in effect told Washington that the Soviet-Swedish trade agreement was none of America's business. The Soviet Government expressed astonishment at the American arguments "concerning the very complicated consequences that the conclusion of such an agreement would have on international trade" and asserted that "The Government of the Soviet Union and, as one may assume, the Government of Sweden, stand in no need to make a point of consultation with the United States on the favorableness or unfavorableness of a trade agreement." [58]

Such declarations of political independence may be permissible exercise of national sovereignty, but they do not augur well for the

55. See the State Department's note of protest to Sweden, released September 4, 1946 and reported in the *New York Times*, September 5, 1946, p. 4.

56. *Ibid.* The Department also requested Sweden to "retain its freedom of action by inserting in any such bilateral trade agreements which it negotiates an appropriate clause making such agreements subject to any general agreements looking to trade expansion on a multilateral basis to which Sweden may in the future become a party."

57. *Ibid.*

58. As reported in a London dispatch to the *New York Times*, September 3, 1946. A later dispatch (September 16, 1946) quoted a Moscow radio commentator as characterizing the Anglo-American principle of "equality of opportunity" in international trade as merely a smoke screen for imperialistic economic expansion.

American trade program. Meanwhile other nations have entered into similar bilateral (and preferential) agreements designed to meet their individual trade needs. On July 24, 1946, shortly after Congress had approved the British loan, Great Britain concluded an agreement with Canada for the purchase of from 140 million to 160 million bushels of wheat annually for four years at specified prices. Other British bilateral long-term purchasing arrangements include: four-year contracts for all of Australia's exportable meat, butter, and cheese, for Argentine meat, for Canadian cheese, and for all exportable sugar from British colonies; a three-year contract for all Canadian exportable bacon and ham; a twenty-month contract for British East Africa's sisal output; and a one-year contract for all of India's, Ceylon's, and British East Africa's exportable tea—95 per cent of world output. In the summer of 1946 the British Government was negotiating a contract for the purchase of British West Africa's entire cocoa output—60 per cent of world production.[59]

These straws indicate not merely wind direction but wind velocity. From the standpoint of the declared objectives of the American State Department's proposals and of the United Nations' Conference on Trade and Employment, the direction is wrong and the velocity high. American power and influence, however, are great. The United States may be able to reverse the trend, even though it is well defined and has momentum. But to do so will require not merely national prestige and political influence. If the United States is to obtain the adherence of the leading trading nations to its official program, it must convince them that the program is designed to meet their needs no less than American needs, to promote world prosperity as well as American prosperity. The United States must be willing not merely to sell abroad but also to buy abroad. It must assume the responsibility that goes with international lending; it must be willing to develop a negative trade balance or to continue lending on a rising scale.

Whether the United States is willing to play the role of a mature creditor country and accept continually larger import balances is by no means certain. But unless it is prepared for this role its trade program is likely to fail—and with it, its anticartel program.

59. See *World Report* (Washington), August 8, 1946, p. 16.

*Chapter 11*

# THE ROAD AHEAD

CARTEL ISSUES are many and complex. They touch practically every aspect of modern economic life—prices, technology, employment, investment, income, the whole range of interests encompassed by work, wealth, and welfare. Moreover, they reach beyond the economic sphere. At practically every turn they involve political sentiments and government policies. The negotiation of international cartel agreements, whether or not governments directly take part in them, brings into play conflicting political viewpoints and divergent national interests. In their practical application, cartel agreements affect, in one way or another, the industrial development of each member country, either aiding or hindering its public economic policy.

Strategical military implications, ideological undercurrents, and emotional overtones give bewildering variety to cartel issues. But they acquire a certain unity when conceived in terms of the perennial and pervasive issue of economic freedom versus economic security. These are not mutually exclusive alternatives, of course; in some degree they are complementary: with more freedom goes greater security, with greater security more freedom. But free choice of occupation is only an illusion for those who have the will to work but lack the opportunity. And freedom of enterprise is only a forlorn hope for those who have the ambition but lack the means to go into business for themselves.

The measure of economic freedom is the range of choice really open to the individual in the use of his productive power and his income; not alone what the law allows, but as well what the facts permit. Men have learned that too much legal freedom can result in a limitation of actual economic freedom no less burdensome thân governmental restrictions on their activities and modes of living. Yet they are unlikely to overlook a lesson written large in the history of

the past quarter century: that the quest for economic security may lead to economic dictatorship, with a loss not only in economic efficiency over the long run but also in political and civil liberty. In a very real sense, a large measure of economic freedom is an inseparable condition of civil liberty itself. A generation that has experienced or witnessed the horrors of concentration camps and the ruthless liquidation of dissident minorities will think twice before exchanging the risks of economic insecurity for those of civil insecurity.

This, then, is the acute dilemma men face in a machine age: how to assure the disciplined cooperation that will maximize production and minimize waste, coordinating their varied activities without sacrificing the values that come from creative self-expression and spontaneous self-direction. On this question, men are divided, and political frontiers are not the only dividing lines. Historical eras divide them. Men of the nineteenth century had, generally, a strong bent for individual self-direction and responsibility in economic affairs. Those of the twentieth are on the whole more disposed to accept, even to cultivate, systematic coordination and collective responsibility. Levels of cultural development also divide men on this issue: east European peasants and East Indian natives have a different outlook on the relative advantages of economic solidarity from that of American businessmen.

But perhaps above all, men are divided on this issue by temperament and by ethical values. Those who fear concentrated power and love individual liberty are predominantly exponents of an economic system that depends mainly on decentralized controls exercised impersonally through competitive markets. Those who crave power —either political or economic—or who fear great power less than economic insecurity, generally advocate an extension of centralized controls, whether publicly or privately administered. But the hardboiled are not all in the first camp, by any means, or the half-baked in the second. Drivers and dreamers may be found on both sides of the cartel issue.

### *An Integral World Economy Lies in the Far Future*

Cartel policy is only one phase of international economic policy. But broadly conceived it is more likely than any other phase to re-

flect the growing tensions of a diplomatic tug of war that is cleaving a world once united in the fight against fascism. For whether it be positive or negative, international cartel policy will largely determine the terms and conditions on which international trade proceeds. And the terms and conditions on which the products of different countries enter world markets will vitally affect not only the pace of their industrial development but the pattern of their domestic economic organization and income distribution. Plainly, international cartel policy is more closely connected than international monetary policy with the vital issues on which turn domestic economic struggles for power and livelihood. Monetary policy is comparatively neutral on the questions of industrial organization and trade privileges—the warp and woof of cartel policy.

Lacking a world in which international economic exchange is subject to common rules, including a single world-wide cartel policy, it is a question what policy the United States could most advantageously pursue in governing its foreign economic relations. Do realism and self-interest require this country to give up trying to make international markets freer and more competitive? Does a "collective bargaining" procedure—the negotiation of a series of multinational pacts covering the volume, direction, and terms of trade in various products—provide the smoothest and most direct route to world economic reconstruction? In deference to the views of other nations, many of them friendly, should America abandon its anticartel policy and try to obtain the best deals possible in a regime of international allocation of markets, regulation of exports and imports, administration of prices?

These are thorny questions for which there are no simple answers. But it is possible, in the light of the preceding chapters, to summarize the considerations that favor or oppose the leading alternative positions indicated and to appraise their prospects.

Three major circumstances weigh against an unbudging anticartel, free-market stand. First, it means swimming upstream, against the current. Second, the period of industrial readjustment and trade rechannelling that inevitably follows war is a bad time for establishing a free-market regime. Third, the political obstacles to a practical program leading to free competition in world markets are serious, if indeed not insurmountable.

*Trend Toward Collective Market Controls*

Only in America is there widespread sentiment in favor of private enterprise and free competition, and even here the issue is clouded by a lack of understanding of the interdependence between these two basic elements in the traditional economic system. Probably most Americans earnestly want to keep a private enterprise economy. But many of them doubt that effective competition can be maintained and are skeptical that such an imperfectly competitive capitalism as has developed can insure rising standards of living and full employment.

The roots of this skepticism extend into the nineteenth century, when business collectivism began to transform the American economy. The abuses and the gross inequalities of income that accompanied the concentration of economic power were not inherent in competitive markets. They were inherent only in laissez faire: the lack of a deliberate social policy for maintaining the conditions indispensable to genuine freedom of enterprise and salutary competition. Nevertheless many people came to believe that competition was partly responsible for the inequities and insecurity that plagued the national economy. Experience during the long depression of the 1930's certainly did not help to restore popular faith in its efficacy as an automatic regulator of the economy in either the domestic or the international sphere.

But irritation with wartime bureaucratic controls led to a new appreciation of economic freedom. After the war, the exceptional opportunities for money-making in decontrolled markets restored to private enterprise something of its old buoyancy. War-pinched consumers welcomed the chance freely to spend their dollars, trying to satisfy long pent-up demands. In the flush of enthusiasm for the restored system of private enterprise and free markets Americans are not currently inclined to inquire how competitive or dependable it is. But it probably would not take much of a business depression to reawaken old doubts and to foster renewed experiments in centralized controls, both by business and by government. If renewal of the cartel ties of American business with foreign firms has not been a marked feature of postwar developments, that is probably because of the continuing weakness of the traditional export industries in

most of the countries that before the war took a leading role in cartel programs and, correlatively, because of the great advantage that American firms have, at least temporarily, over their foreign rivals.

Outside North America the trend toward economic collectivism is more evident and more definite. In Europe, Asia, Australia, and even South America, the people more and more look to their governments for paternalistic guidance and support. This outlook does not reflect merely the spreading influence of the Soviet experiment. The contagion of ideas, spread by propaganda, and the example of strength and unity that Russia displayed in a great crisis probably quickened the imagination of common people and made them more receptive to social experimentation.[1] But economic collectivism was not indigenous to Russia. It borrowed the socialist ideology from western Europe. The first sprouts of modern collectivist philosophy were offshoots of German romanticism, English utilitarianism, and the French "enlightenment."

The contemporary spread of economic collectivism owes more to the pressure of facts, however, than to the logic of ideas. Destitution is the breeding ground of discontent. The distress and despair that accompanied the Great Depression withered ambition for economic independence and trust in self-help. World War II brought even greater misery and still further dissipated individualistic aspirations. In the war-devastated countries of Europe and Asia—with their demolished towns, their wrecked factories, their bankrupt economies—millions of starving, dispirited people seek only escape from their wretchedness, by whatever means. In such an environment an appeal to reason loses force and the idea of economic collectivism flourishes.

### *The Times Unfavorable for Restoration of Competition*

The aftermath of a global war is a difficult time to restore and reinvigorate competition in world markets. The world economy is out of joint. In many areas, productive capacity has been severely crippled. The devastation wrought by military operations is only one, and perhaps not the major, source of reduced productive power. Ma-

1. For an exaggerated view of the spread of Russian influence, see E. H. Carr, *The Soviet Impact on the Western World,* Macmillan, New York, 1947.

chinery has depreciated or worn out; repairs and replacements have been put off. After the fighting stopped, the occupying powers destroyed many German war plants equally useful for peace. The Axis countries during the war and Soviet Russia after victory moved equipment to new locations on a wholesale scale. Whether or not the transfer eventually increases the productivity of the factories thus uprooted (and this is extremely unlikely), it depletes the resources of the region from which such factories came without immediately making an equivalent addition to productive power elsewhere. Warfare withdrew manpower from industry on an unprecedented scale. Many potential producers will never return to work. Some will return physically disabled or with skills lost or impaired. The purchasing power of the war-devastated regions will for a long time reflect their reduced productive capacity.

At the same time, other areas have enormously expanded their productive capacity in response to wartime demands. Battle lines cut off customary sources of supply for some goods. The military demand for some products outstripped ordinary civilian demand. As a result, productive facilities in some mining, agricultural, and manufacturing lines have increased well beyond the level that producers are likely to find it profitable to use permanently. Once the nearly empty supply pipelines are refilled, the absorptive power of peacetime markets is not likely to continue long to match productive power in rubber, aluminum, magnesium, and similar war-expanded industries.

Reconverting to a peace economy is analogous to the problem of industrial mobilization for war. It involves a radical overhauling of the whole structure of production. In 1940–1941 industries designed for producing cameras, radios, alarm clocks, passenger cars, and other military nonessentials were converted to the production of range finders, tanks, and other military equipment. In 1945–1947 they have had to be reconverted for civilian production. The price mechanism is ill adapted to effecting such major and sudden economic changes. It is designed for continual adaptation to piecemeal (marginal) changes in demand or in the conditions of supply. Competitive markets are instruments of economic evolution, not of seismic upheaval and drastic reorganization. It would be a leap in the dark, after a period of total war, suddenly to release interna-

tional trade from the guiding hand of interallied control boards and national wartime administrative agencies, and thrust its regulation on long-disused competitive mechanisms. It invites economic chaos and might discredit the idea of free markets.[2]

World wars not only disorganize the international economy, they impoverish it. They may temporarily enrich a few nonbelligerent countries. World War II made Argentina relatively—and perhaps absolutely—more opulent than ever before. But war injures the world economy as a whole and the losses fall most heavily on the principal belligerents. War consumes wealth. It deprives industry of capital. It not only reduces the absolute number of the world's workers and the proportion of workers in the whole population;[3] it reduces their reserves of physical and nervous energy. The process of attrition through economic blockades—one of the principal elements in modern warfare—bears hard on civilian populations. Frequently it undermines the health and strength of those on whom postwar economic recovery depends.

Inevitably, therefore, after a long and gruelling war, living standards for the great mass of the world's peoples fall. For the world's population as a whole the margin above the necessary minimum of subsistence narrows. When society is in hard straits it may be necessary to regiment the means of production and ration essential consumer goods to insure political stability. Free enterprise and free markets at such a time are luxuries. In more genial times, people may recognize that freedom of choice in the use of productive resources and of private purchasing power contributes significantly to economic welfare. For many people freedom is itself one element of welfare.

2. Gradual decontrol wisely planned and efficiently executed is doubtless preferable to a sudden abandonment of all controls. But a mixed system is not likely to have the benefit of such wisdom and efficiency. For political factors, more than economic considerations, are likely to determine how controls are used, when certain controls shall be removed, and what controls shall be retained. In practice, such a system may eventually bring greater economic disturbances than would an abrupt reversion to a free market.

3. Except, perhaps, during the period of hostilities, when large numbers of women accept employment and the customary retirement age is frequently disregarded. After war ends, however, there is usually an offset to the decline in the proportion of able-bodied workers in the population. War jolts men out of accustomed habits of thought and behavior. In this way, it frequently spurs technological innovation and leads to the development of new tastes or trends of demand. But these effects are generally not seen for some years after the cessation of hostilities. They were longer in showing themselves after the Napoleonic Wars than after World War I, and it may be that the incubation period will be shorter after World War II than it was after World War I.

But when society lacks a comfortable margin above the subsistence minimum for many of its members, economic freedom assumes a different aspect. Free markets are likely to have less appeal than usual at such times. Such is the case today.

### *Outline of an Effective Anticartel Policy*

To revert now to a nineteenth-century policy of laissez faire for international trade would not promote free enterprise, free competition, and a free-market economy. Experience has shown that a let-business-alone policy leads to monopoly, not competition. Given the existing concentration of wealth and restrictions on the use of technology, both domestically and internationally, laissez faire would amount to an official endorsement of cartels. Instead of guaranteeing equality of opportunity, it would freeze the status quo and perpetuate vested interests. To restore free enterprise and reinvigorate free competition would require something more than a prohibition of cartels.

As the analysis in Chapter 8 shows, to provide the conditions in which free markets can perform their functions effectively would involve some rather thoroughgoing measures. It would be necessary to remove quantitative restrictions on imports, to reduce tariffs drastically, and to give up nationalistic exchange controls. It would require a thorough overhauling of the patent system, eliminating the privilege of sabotaging technology through restrictive licenses and patent pooling. It would also require policing international trade to insure observance of the rules of the game, such as those relating to commodity standards, fair trade practices, nondiscriminatory pricing. Perhaps above all, it would require simplification of corporate structures and establishment of suitable statutory standards for corporate organization.

A positive anticartel program along these lines would have marked advantages for the development of a world economy. It might reinvigorate competition in international trade, and indirectly in domestic trade too. But is it politically possible? It would be difficult for the chief trading nations to reach agreement in principle on such a program, and still more difficult to insure that they would severally carry out their commitments and enforce the suggested measures—in spirit as well as in letter. The obstacles to the realiza-

tion of such a program are vast. Political prejudices, national jealousies, and vested business interests would oppose with strong forces a positive policy of this kind.

*Mutual Accommodation vs. Unconditional Surrender*

To seek international collaboration for the reinvigoration of free enterprise and free competition in world markets is not necessarily to confront foreign countries with an either-or choice. If the United States were to ask them, as the price of its cooperation in a program of economic reconstruction, to subscribe to a rigid anticartel policy, to abolish protective tariffs, and to refrain from organizing key industries as public enterprises, they would no doubt regard the price as too high. The whole-hog-or-none strategy is unlikely to get results in a world torn by ideological conflicts and nationalistic rivalries. It is, on the contrary, likely to aggravate political dissensions and put off the achievement of one economic world—the world of peace and plenty.

Realism demands some concessions to existing institutions, vested interests, and ingrained prejudices. None but a doctrinaire proponent of unrestricted free trade and atomistic competition imagines that at this day any important country could be persuaded forthwith to repeal all its tariff laws, dissolve all its trusts, and leave to the mercies of competition all its industries, particularly those directly related to national defense. The United States itself is not prepared to go that far. Neither the State Department nor any influential section of the public has proposed a reversal of the policy of heavily subsidizing the shipping and aviation industries, and Congress has recently recorded its attitude toward tariff reform in the wool-import restriction bill. Even less ready to embark on an all-out program of eliminating public and private trade restrictions are the western European countries which, with their economies disrupted and their assets dissipated by the war, face a Herculean task to get production started again. Least of all could one expect Soviet Russia and its satellites to throw overboard their whole social philosophy and completely recast their economic policies in order to make a capitalistic economic system work more effectively.

Common sense suggests that the most that the proponents of a free-market, anticartel policy can reasonably attempt is to retard the

further development of governmental and private restrictions on trade and to reverse the movement toward them. Though perfect competition is unattainable, an effort to preserve as much freedom of opportunity as possible in trade and industry is far from futile. Half a loaf is better than none.

If an all-out drive by the United States to obtain international sanction for a full-fledged anticartel policy is impractical, even quixotic, so would its subscription to a procartel policy be unrealistic. If adamant insistence on a free-market regime in world trade is visionary, weak-kneed acceptance of trade regimentation and cartel restrictions is certainly shortsighted. For renunciation of the basic principles set forth in the State Department's *Proposals for Expansion of World Trade and Employment* and in its *Suggested Charter for an International Trade Organization* would mean far more than a diplomatic humiliation. It would irretrievably compromise both the present economic interests of the United States and its traditional domestic economic policy.

### *America's Stake in Economic Internationalism*

The technology, productive facilities, managerial experience, and labor skills of American industry equip it for an era of foreign trade expansion. Foreign demands for the machinery, vehicles, construction materials, household equipment, and other products American industry can supply on a mass-production basis are exceptionally strong, spurred by the needs of reconstruction and the urge to industrialization. The opportunity is great. Unless this generation grasps it, it may not come again. To take full advantage of industrial specialization requires broader markets in some lines than the United States itself offers. Other countries may obtain similar advantages from wider markets for certain of their products. The recent revolutionary advances in transport and communication not only make possible but make expedient the most rapid and furthest advance toward a one-world economy that is politically feasible.

America's stake in free markets is closely associated with its stake in political democracy. To defend the second and sacrifice the first, in the interests of international harmony, would produce only a deceptive security. The world wants peace but it has had enough of appeasement. If the United States cannot reasonably expect foreign

countries to abandon forthwith a collectivist economic philosophy and an authoritative industrial discipline, no more can foreign countries reasonably demand that this country renounce the doctrines of economic and political liberalism that are the warp and woof of the American Proposition—not only in Jefferson's phrase but in current opinion.

But can fruitful economic collaboration on the principle of international division of labor exist among totalitarian state-controlled economies, socialistic mixed economies, and economies that rely mainly on private enterprise and flexible markets to direct production and effectuate exchange? In brass-tack terms, the question is whether communistic Russia, semisocialistic Britain and France, and capitalistic America can work together in the economic field. Obviously, the hardest nut to crack is Soviet-American economic collaboration. If these two regimes, representing opposite forms of industrial organization,[4] can develop financial, technical, and commercial relationships on a mutually satisfactory give-and-take basis, no serious difficulties should stand in the way of working out a *modus vivendi* with the mixed public enterprise–private enterprise economies of western Europe.

### *Possibility of Doing Business With Soviet Russia*

The purpose of a program of curbing cartels and reducing tariff barriers is to lower production costs and prices of many commodities

4. Representing, also, opposite forms of political organization. A succinct and not misleading characterization of the opposite political systems would be totalitarianism and democracy; of the opposite economic systems, communism and capitalism. But, of course, the political and economic systems in each case are interfused, so that describing the Soviet regime as one of communistic totalitarianism and that of America as capitalistic democracy gives a better-rounded picture of their respective setups. Also it has the advantage of distinguishing the Russian from the German, or fascist, type of totalitarianism, and the American from, say, the Eskimo, or tribal, type of democracy.

Semanticists may object that the all-powerful state is an unreal abstraction, that not even in Russia does the Party bureaucracy plan, order, and supervise every detail of economic activities. Similarly, semanticists may object that the American government is not a pure democracy and that the power of the owners of capital to control production is limited in many ways, by law and otherwise. These precious terminological qualifications may be granted, for whatever they are worth.

This study does not attempt to survey the prospect of reaching a political accord with Russia, whether in the matter of a settlement of the terms of peace with the defeated Axis countries or on the larger question of an enduring pattern for Russian-American diplomatic relations. Nevertheless, without some sort of political accord the problem of finding a basis for economic cooperation simply vanishes. It becomes then a question of finding the most effective method of economic warfare. So it is necessary in this study to take some account of the attitude toward capitalistic countries which Soviet officials have displayed in current diplomatic negotiations.

and to expand international trade through a more economical use of resources and greater geographical division of labor.[5] Theoretically a collectivist economy need not plan for self-sufficiency. Just as economic isolationism is possible for a capitalistic country, so economic internationalism is possible for a communistic country. Soviet Russia need not renounce the benefits of international division of labor any more than it need renounce consumers' choices as a guide to domestic production. A collectivist regime could obtain real advantages from active participation in the network of world trade. In this way, more rapidly than under an autarchic policy, it could raise the living standards of its workers toward the level of living standards in advanced capitalistic countries.

Though it may be theoretically possible for a collectivist society to integrate its economy in a world economy of international division of labor and multilateral trade, it is hardly conceivable that Soviet Russia will do so. The obstacles are partly political and psychological, partly economic. First, it would mean a repudiation of the basic communist dogma that capitalistic societies are implacable enemies of a collectivist society. Ever since the 1917 Revolution the Soviet regime has sought maximum self-sufficiency in order to strengthen the country's power to resist suspected "capitalistic encirclement."

As early as 1920 Lenin, while authorizing the purchase abroad of "indispensable" equipment for "rehabilitating the national economy," declared that the ultimate aim of Soviet foreign trade policy

5. Cartels and tariffs lower the efficiency of industry generally by impeding the most advantageous distribution of productive resources among various fields. In international trade, they interfere with regional specialization. But, of course, specialization can be carried too far. For diversification of economic activities also has certain potential advantages. Overspecialization is dangerous, and not alone from the political viewpoint—involving dependence on foreign nations with different traditions and outlooks. Beyond a certain point it may be economically disadvantageous for individuals or groups to concentrate on doing the things that each can do better than other things. Neither the human animal, nor a social group, is a machine. For a healthful life, men and nations need variety of interests and activities.

As Keynes observed, the balance shown by an accountant's reckoning of the "financial results" of unrestricted free trade and the fullest development of international division of labor as compared with those obtainable from fostering home industry and national self-sufficiency is not a safe guide for policy. See J. M. Keynes, "National Self-Sufficiency," *Yale Review*, Summer 1933, pp. 755-69. Although Keynes also warned against the grave dangers of carrying economic nationalism too far, the general impression his discussion leaves is that he unduly minimized the contribution foreign trade can make to economic welfare. Long experience suggests that the bias in favor of home industry is likely to cause more harm than is doctrinaire devotion to free trade. Cf. Jacob Viner, "The Prospects for Foreign Trade in the Post-War World," an address given at the Annual Meeting of the Manchester Statistical Society, June 19, 1946, published by the Society, Manchester, 1946.

was "to achieve economic independence of the capitalist world." [6] After summarizing achievements under the Second Five-Year Plan and stressing the approach to "technical and economic independence of capitalistic countries," Stalin told the Seventeenth Party Congress (1935) that: "This summary is the basis of the firmness of the internal position of the U.S.S.R., the basis of the firmness of its forward and rear positions in the midst of capitalistic encirclement." [7]

### *Wartime Cooperation, Peacetime Autarchy*

Undoubtedly the situation is somewhat different today, after four years of Allied cooperation in a victorious war against fascism. The rank of Soviet Russia among the great powers and its prestige among many foreign peoples have risen markedly. The defeat of the Axis has removed the threat of aggression from its two powerful, militant, and close neighbors—Germany and Japan. Important new centers of Soviet industry and new lines of production have added more than a cubit to Russia's economic stature since 1935. But in spite of all this and the substantial military and economic support Russia received through lend-lease, the evidence does not suggest any significant change in the Soviet policy of socialistic autarchy. Quite the contrary.

Premier Stalin's address of February 9, 1946, before the Twenty-eighth Party Congress carried a strong implication of tenacious adherence to the prewar policy in the years ahead. Though not explicitly avowed, its major premise was that capitalism breeds war; and its minor premise was that in the next war Soviet Russia would be the object of attack. Plainly, the help Russia received from abroad during World War II has not dissipated Soviet fears of "capitalistic encirclement." In Stalin's words:

> It would be incorrect to think that the war arose accidentally or as the result of the fault of some of the statesmen. Although these faults did exist, the war arose in reality as the inevitable result of the development of the world economic and political forces on the basis of monopoly capitalism . . .
>
> Perhaps the catastrophe of war could have been avoided if the possibility

6. Quoted from A. P. Rosenholz (People's Commissar for Foreign Trade), *The U.S.S.R. and the Capitalist World,* Vneshtorgisdat, Moscow, 1934, pp. 3-4.
7. Quoted from *idem, Foreign Trade and Economic Independence,* U.S.S.R. Chamber of Commerce, Moscow, 1935, p. 4.

of periodic redistribution of raw materials and markets between the countries existed in accordance with their economic needs, in the way of coordinated and peaceful decisions. But this is impossible under the present capitalist development of world economy.[8]

A second factor making it improbable that the present Soviet regime will collaborate on an international anticartel, free-trade program is that it would involve a reversal of its foreign economic policy. Ever since Stalin's accession to power, through successive Five-Year Plans the Soviet leaders have energetically pushed forward an industrialization program. They have sold abroad only the minimum amounts necessary to pay for the machinery and technical assistance urgently required for rapidly building up the country's heavy industries. To what extent this economic diversification has been economical, no outsider—perhaps not even an insider—can say, because Soviet affairs are shrouded in secrecy and such statistical data as are released are of dubious reliability. But probably some of the new industries could not survive on a basis of comparative costs. It stretches credulity almost to the breaking point to believe that Soviet leaders may now embrace a policy that might mean abandonment of any important part of the industrialization program they—and the Russian people perforce—have been at such pains to advance. Yet this is what bona fide collaboration in the projected International Trade Organization would mean.

For still another reason Russian acceptance of a program at all resembling that put forward in the State Department's *Proposals* is quite unlikely. The Soviet foreign trade monopoly is itself a super-

8. For full text of Stalin's speech, see *New York Times*, February 10, 1946, p. 30. It is true that these repeated expressions of a lively fear of capitalist encroachment and a resolute determination to attain "economic independence of the capitalist world" are usually accompanied or interspersed with protestations of a profound belief in the possibility and desirability of developing closer economic relations with foreign countries. In his response to a foreign correspondent's questionnaire in September 1946, Stalin said: "I do not think that the ruling circles of Great Britain and the United States could create a 'capitalist encirclement' for the Soviet Union even if they so desired, which, however, I do not assert." He also indicated his belief that "communism in one country" was compatible with the growth of trade with free-enterprise, open-market economies. See *New York Herald Tribune*, September 25, 1946, p. 2.

A decade earlier, in the same Party Congress speech in which Stalin defied "capitalist encirclement," he said: "Our foreign policy is clear. It is the policy of preserving peace and increasing our trade relations with all countries. The U.S.S.R. does not think of menacing anyone. . . . We stand for peace and work for the cause of peace. . . . Whoever desires peace and seeks business relations with us will always have our support." Quoted from Rosenholz, *Soviet Foreign Trade: New Developments*, Trade Delegation of U.S.S.R. to Great Britain, London, 1936, p. 17.

cartel, a cartel linking together for the purposes of external commerce all the separately administered trusts for different branches of industry throughout the fourteen Socialist Republics forming the Soviet Union. The Party bureaucracy that runs this governmental cartel of cartels is not likely to look with favor on an anticartel policy that applies to Russia. For a bona fide Soviet commitment to support such an international trade policy would certainly involve limitations at some points on the discretionary control of this group over what, when, where, and at what prices Soviet foreign purchases and sales would be made.

*Russian Participation in an Anticartel Policy Would Be Misleading*

The conclusion appears inescapable that the chances are almost nil of overcoming Soviet intransigence toward a policy of integrating its collectivist economy with the semisocialistic economies of western Europe, and the mainly capitalistic economies of America. Soviet Russia probably will not cooperate to make a private enterprise, free-market system work more effectively. Significantly it has taken no part, even consultatively, in the United Nations Conference on Trade and Employment and has brusquely rejected the Marshall Plan.

Even if the Soviet leaders could be convinced that their fears of capitalistic encirclement were groundless and could be persuaded to join in a program of economic collaboration, it is difficult to see how their adherence to the projected International Trade Organization would add much to its advantages for other members, from the strictly economic standpoint. The object of the whole program of international economic collaboration sponsored by the State Department is to permit buying and selling in world markets with as little obstruction as possible by tariffs and cartels. Concretely, the aim is to reduce tariffs and curb cartels. To equalize trading opportunities means to abate discrimination. But it is in the nature of a monopoly to discriminate. By following a discriminatory policy, it can maximize its returns.

Professor Viner puts the nub of the difficulty as follows:

> The principle of non-discrimination constitutes the heart of the international code which the United States is proposing for general adoption. The

principle can be defined, violations of it detected, and definite sanctions devised, within reasonable limits, with respect to the normal operation of import duties, quotas and subsidies. None of this is true with respect to the trade-operations of a state-monopoly.

When protection of domestic industry against foreign competition is accomplished by means of import duties, quotas, or subsidies, it is possible to devise formulae of general application limiting the amount of such protection which are reasonably precise and enforceable. This is not true in the case of a state itself operating a national industry, or still more, a national economy as a whole.[9]

Thus, even assuming that Russia were to make an about-face in its foreign economic policy and become a member of the projected International Trade Organization, this would not bar its use of restrictive marketing policies and surreptitious resort to discriminatory trading tactics. As the Soviet state buys and sells abroad through a foreign trade monopoly, it needs no tariffs or international cartel affiliations to enable it, if it chooses, to restrict either imports or exports. Because it could promote its short-run national interests by using whatever monopolistic power its foreign trade agency might possess, it would be quite likely to do so. Neither statesmen nor economists have thus far discovered any practicable procedure to prevent it from taking such action. Section E, Article 31, of the Draft Charter of the International Trade Organization simply requires that a state trading monopoly "shall, in making its external purchases or sales of any product, be influenced solely by commercial considerations."[10]

But from the standpoint of other members the practical value of such a Soviet commitment would be extremely slight. With its state trading monopoly the sole link between the Soviet economy and the outside world and Soviet internal prices completely insulated from world market prices, no proof of compliance or noncompliance with such a treaty commitment would be possible. As Professor Viner has observed, for a country with a state trading monopoly, "any undertaking . . . to conduct its foreign trade on 'commercial' prin-

9. Jacob Viner, *The Place of the United States in the World Economy*, Princeton University Bicentennial Anniversary Conference, Session II, Panel 4, October 8, 1946, p. 7.

10. See *Report of the First Session of the Preparatory Committee of the United Nations Conference on Trade and Employment*, London, 1946, p. 32. This Article follows closely the wording of Article 26 of the State Department's *Suggested Charter*.

ciples amounts to little more than a self-denying ordinance inherently insusceptible of external policing." [11]

Nevertheless, if Russia were to take part in the International Trade Organization on a *pro forma* basis, in practice its adherence probably would not afford it much of a special advantage over other members, even though they were to extend it most-favored-nation treatment without any assurance of a genuine *quid pro quo.* Though Russian participation in the program may involve a certain liability, its remaining aloof from the program would also involve risks. The practical grounds for holding the door open to Russian participation, despite the emptiness of a promise to conduct the business of its foreign trade agency on "commercial principles," is that in few lines of trade is it likely that the Soviet agency would have an upper hand. A state foreign trade monopoly can exercise an appreciable monopolistic influence in international markets only for those products of which it buys or sells a large part of the total supply. The volume of Russian foreign trade has never amounted to as much as 5 per cent of the world total.[12] Nothing suggests that in the near future either the relative volume or the strategic importance of Russia's contribution to world trade is likely to increase. The oil, fish, fodder, timber, and nonferrous metals, for example, that Russia may find it advantageous to export to pay for the machinery and consumers' goods it needs are not likely to form a large enough part of the world's total exports of most of these items to give it any monopolistic influence in foreign markets.

Russian exports of a few products, like platinum, may be such a large part of total world supplies that the Soviet trading monopoly could manipulate the market to maximize its net revenue and harass producers in other countries. But in most lines the prospective scale of Russian exports would not give its trading monopoly control of the world market. Similarly, in few import lines is it likely that Russian purchases will make up a large enough part of the aggregate demand to give the Soviet purchasing agency anything ap-

11. *The Place of the United States in the World Economy,* p. 7. See also *idem, Trade Relations Between Free Market and Controlled Economies,* League of Nations, Geneva, 1943, pp. 77 ff., where the author elaborates this argument.

12. From 1925 to 1937 Soviet foreign trade averaged about 1.5 per cent of total international trade. See Alexander Gershenkron, *Economic Relations With the U.S.S.R.,* Committee on International Economic Policy, New York, 1945, p. 20.

proaching a sufficient bargaining leverage to enable it to dominate the market.

*Consequences of Russian Rejection of an Anticartel Policy*

If the Soviet Union does not adhere to the projected International Trade Organization, it might or might not try to carry on some commerce with the outside world beyond the fringe of its satellite neighbors. Assuming it does not decide to isolate itself economically from the rest of the world, Russia's only practical alternative to taking part in the program for developing world trade on a multilateral basis and regulating it through international agencies is to proceed on a bilateral basis. Such a procedure is likely to have serious political consequences for the rest of the world.

Through discriminatory tactics in bilateral trading the Soviet authorities could exert a disruptive influence on free-market economies by sedulously destroying that equality of opportunity on which they depend. The Soviet high command is unlikely to overlook the possibilities of spreading communism through a subtle use of such monopolistic bargaining powers in world markets as it possesses to hamper and harass capitalistic trade. The leaders of a collectivist state, like statesmen of other countries, are keenly aware of the disadvantages of political isolation. They seek allies, and preferably allies of kindred outlook. Economic discrimination is an effective device for winning friends and influencing governments. The Soviet foreign trade monopoly, by favoring those countries whose political friendship the Party hierarchy desires to cultivate,[13] can help greatly to extend the sphere of Russian influence, indeed to replace "communism in one country" by communism in many countries.

Furthermore, bilateralism would be almost certain to spread, with its inevitable tendency toward trade balancing between the parties and correlative sacrifice of the potential advantages of multilateral exchange.[14] There would be great danger of a repetition of the

13. The "foreign relations" of no country are sharply divided between the economic and the political, and this is especially true of a collectivist country. A single, highly unified, and cohesive group manages both aspects of Soviet foreign affairs.

14. If, instead of Denmark buying fodder from Russia and selling bacon and butter to England, while England in turn pays for its bacon and butter by machinery exports to Russia, thus enabling Russia to get in exchange for its fodder exports the English machinery it wants (rather than the Danish bacon and butter for which its need is less), each pair of countries attempts to work out a bilateral trade agreement which will bring the bargainers' direct trade into balance, obviously all will lose some of the potential advantages of international exchange.

experience of the thirties. The suspicions, recriminations, and retaliations that the negotiation of a series of bilateral commercial agreements between Russia and various non-Soviet countries could hardly fail to provoke might tear asunder the whole fabric of international trade—and of international security too.[15]

It is important to persuade Russia to forego the political discrimination inherent in bilateral trade agreements and the economic discrimination to which they are so susceptible. But it is more important to persuade the world's leading trading countries to take part in the proposed international program for developing multilateral trade. Provided all or most of the non-Soviet world will collaborate, the program has a chance to succeed. Even a further development of state trading in specific commodities by countries occupying a position midway between Soviet Russia and capitalistic America, although it would be contrary to the interests of a free-market economy, need not prove fatal to the program that the United States has sponsored.

But if the advantages that cooperation in such a program can offer should prove insufficient to deter members, actual or prospective, from adopting—either independently or in concert—comprehensive foreign trade monopolies on the Soviet model, the chances for success of the program would be small. For the spread of state trading monopolies operating on world markets would tend to throttle, just as would the spread of private cartels, the expansive forces on which private enterprise economies depend and which it is the prime purpose of the projected International Trade Organization to release.

15. The State Department's protest against the 1946 Swedish-Russian bilateral pact is a sign of the international tussle in prospect if bilateralism again comes into vogue. (See p. 371.) In such circumstances, the Soviet could pick off non-Soviet economies, one by one. It could offer them bilateral trade agreements, like the one with Sweden, on terms they could scarcely afford to reject. Indeed, the picking-off process is already under way. Besides Sweden, Switzerland, Hungary, Czechoslovakia, and Poland have already signed up. These bilateral agreements do not in so many words commit the non-Soviet signatories to renunciation of the rules of the competitive game in their dealings with other countries. But if they carry out the bilateral agreements they must develop an institutional apparatus for the conduct and control of foreign trade that is incompatible with the techniques of a free-market regime.

The degeneration of bilateralism into an unseemly scramble for preferment and a mad race for national self-sufficiency is practically a foregone conclusion. No other lesson can be drawn from the interwar experience. As Professor Viner concludes, after a summary review of the record: " . . . these direct controls are in general injurious to world prosperity and are barriers to international economic collaboration and to international harmony. Their substantial elimination is a prerequisite for the attainment of a peaceful and prosperous world." *Trade Relations Between Free Market and Controlled Economies*, p. 85.

As the proportion of world trade subject to the management of state trading monopolies increases, competitive opportunities for private enterprise shrink and monopoly power grows. If such a drift goes unchecked, countries preferring a free-market economy may eventually be obliged in self-defense to centralize control of their economies, at least in so far as they have trade relations with countries organized on a collectivist basis. As democratic, capitalistic countries regiment their foreign trade to avoid being plundered by totalitarian state trading monopolies, it will become increasingly difficult to avoid a parallel concentration of economic power in domestic trade and industry. Expansion of collectivist economies in totalitarian states anywhere, therefore, constitutes a threat to the maintenance of free economies in democratic states everywhere.

*Going Ahead Without Russia*

If events prove that Soviet Russia must be counted out of a program for abating cartel restrictions and reviving multilateral international trade, what then? Can the United States secure the cooperation of enough non-Soviet countries in such a program to make it workable? The obstacles are formidable, but America has such a large stake in the realization of a program patterned on the State Department's *Proposals for Expansion of World Trade and Employment* that the game is clearly worth the candle.

Weighing against success in the attempt to limit cartel restrictions on international trade and to keep open opportunities for private enterprise in non-Soviet world markets is the extensive resort to nationalization, public enterprise, bulk purchasing, and similar devices by many European countries. These developments signalize a trend toward centralized planning and controlled economies. In the present stage of the world's political evolution, controlled economies are perforce largely national economies. The feeble, tentative efforts to develop planning on an international scale, as in the United Nations Food and Agriculture Organization, have thus far amounted to little. The special interests and diverse traditions of different countries are formidable obstacles to development of international planning beyond the consultative stage. But within their respective national economies, the socialist, social-democratic, centrist governments, and the surviving fascist governments (Spain and Portugal),

of western Europe are all vigorously pushing on toward state control of trade and industry.

Three distinctive features of this development, however, may leave room for cooperation by the European democratic countries in the American anticartel, free-market program. First, the centralized planning and authoritative controls are partly a holdover from the war. The countries that the Nazis looted or that suffered devastation from the blitzkrieg and bombing can hardly afford, as could the United States, to dismantle their war economies promptly when the fighting stopped. During the arduous period of reconversion and reconstruction they are faced with such acute stringencies that expediency calls for continued regimentation of production and rationing of consumption. Only by pulling together in a common effort can they win the critical economic struggle as they won the fateful military struggle. As living conditions again become easier, the prospects for a democratic policy and a free economy may improve. People are likely then to become more receptive to a policy aimed at the removal of private and public restrictions of trade.

Second, unlike Soviet collectivism, the western European socialistic tendencies have a relatively slight autarchic bias. The development of public enterprise and state planning in these countries is not tied up with a world-revolutionary ideology that points to a supposed need for converting or conquering every alien people with a different culture. Western Europe has no messianic complex, like Soviet Russia. Moreover, these western nations are predominantly industrialized societies, largely dependent for their livelihood on foreign trade. The lesson of experience can hardly have escaped them that autarchy means not economic self-sufficiency but economic suicide.

Third, again unlike Soviet Russia, the western European governments that are currently extending state control of industry are not totalitarian. They respect democratic traditions even in their socialistic programs. No one-party government with an infallible leader lays down a "Gosplan" for all branches of the national economy and insures its execution by secret police surveillance, extinction of civil rights, and wholesale purges. The procedure is piecemeal, by trial and error, through compromise and adjustment. France may nationalize, with compensation, the banks and the armament indus-

try. Great Britain may nationalize, with compensation, its central bank only, the coal industry, transport, and some other specific industries. But none of the western European countries shows any disposition to take over the administration of the whole national economy.[16] They negotiate bulk purchase agreements for specific commodities, but have not seriously considered a state foreign trade monopoly. The path these governments are following may conceivably lead to totalitarianism, but they have by no means yet reached that stage. They may, indeed, decide to limit their encroachments on private enterprise and free markets to a degree that would permit the United States to do business with them through these familiar channels.

*Factors Favoring Non-Soviet Economic Cooperation*

The United States has certain bargaining points in its favor in seeking to enlist the support of the nations of western Europe and the British Commonwealth countries for a policy of freer trade and more competitive industry. It has the capital funds necessary for rebuilding the wrecked economies of Europe and developing the resources of younger countries. It can supply both the industrial equipment and the consumable commodities sorely needed for putting war-ravaged people on their feet again. Its own unrivalled productivity and living standards not only offer a glimpse of what cooperation in a free-market economy might achieve for others, but also promise a broad and growing market for the specialized products of different regions.

But by themselves American money, machinery, materials, and markets cannot buy the necessary support for the State Department's *Proposals for Expansion of World Trade and Employment.* In soliciting the cooperation of other democratic nations, whether socialistic or capitalistic, on an anticartel, free-market policy, the United States must back up its avowed principles and proffered program with concrete evidence of good faith. Other members of the United Nations Conference on Trade and Employment have a lively fear of two contingencies. First, they fear that participation in a system of freer trade will expose their economies to great unsettlement

16. Barring, of course, a political revolution. In the summer of 1947 the possibility of such an overturn appeared to be imminent in Italy and France.

because the American Government does not, in their view, fully appreciate its responsibility to abate the violent periodic disturbances to which the American economy is subject. Second, they fear that the projected ITO will open the door, not to free competition, but to the destructive competition of American monopolistic big business. They may welcome American loans and investments, but they dread the development of a kind of American imperialism.

To allay that dread will be the first task of the United States and its biggest contribution to a reconstruction of international trade through private enterprise unhindered by cartel restrictions. It is not enough to outlaw international business agreements in restraint of trade and to limit intergovernmental commodity agreements, so long as the domination of giant corporations in many world markets is left undisturbed. The great size of not a few American—and some British—business units renders virtually superfluous collusive agreements for market control. To reduce the monopolistic elements in the structure of American industry will be part of the price America must pay for the sort of world economy it seeks. Passion and prejudice will doubtless be mobilized to resist such a change. But it is in line with what the United States asks of other countries, and it would show that we mean what we say. If the socialistic economies of western Europe give up bulk purchasing and undertake to limit or suppress trade restrictions, it is hardly presumptuous on their part to ask the United States to stiffen the enforcement of its own antitrust laws and to supplement them in ways calculated to speed the realization of their goal.

### *If Worse Comes to Worst*

Conceivably the United States may be compelled to play virtually a lone hand in the game of international trade.[17] In that event, it must depend on eternal vigilance to preserve and advance all that America stands for. But if it does play a lone hand, it is unlikely to leave the regulation of its foreign trade to competitive forces in an open market. To avoid being victimized by foreign cartels with a monopoly hold on some scarce materials or by state trading mo-

17. The economies of Canada and perhaps even some of the Latin-American countries are so integrally connected with that of the United States and so vitally dependent on its markets that they will collaborate with the American Government on any policy it is likely to adopt.

nopolies following predatory policies of nationalistic aggrandizement, it will probably feel obliged to organize international exchanges of goods, services, capital, and technology in a systematic way and on an authoritative basis. Not otherwise, apparently, could it protect its national interests in—literally, so far as economic policy goes—a lawless world.

## CARTEL ISSUES: A SUMMING UP

If it is realistically conceived as a way of getting more goods and services produced and distributed to a world plagued by scarcities, while at the same time opening up more opportunities for free men to work, invest, and trade on their own responsibility, an anticartel policy is neither an ivory tower dream nor a golden age anachronism. The richest and most powerful nation in the world in seeking such a policy is not pursuing a vain delusion. And the majority of Americans are not alone in preferring the bracing air of economic freedom to the suffocating atmosphere of a centrally planned and authoritatively controlled economy. Restrictions on trade, either public or private, are incompatible with economic expansion and the rising living standards that most men want, indeed, are determined to have. Proof is lacking that the tide of revolt against the pretensions of authority that began with the overthrow of feudalism has run its course.

But the reinvigoration of free markets by the abatement of the monopolistic tendencies embodied in private and public cartels is not easy. It hinges on three basic conditions. The first is the removal of quantitative trade restrictions and an all-round reduction of tariffs. To promote such a reduction was one of the main objectives of the program that the United States sponsored and that is embodied in the proposed charter of the International Trade Organization. But in the tariff bargaining now under way it seems clear that the United States must be prepared to make substantial concessions to countries whose industries are unable, under present conditions, to compete on equal terms with similar American industries. Whether Congress will be prepared to continue the support it has thus far given the State Department in its tariff reduction program remains to be seen.

Freeing international trade from arbitrary governmental restrictions is fundamental to an anticartel policy. This does not mean that the elimination of cartel arrangements depends on a laissez-faire policy. It does mean that the first condition to wide international agreement on a policy of curbing cartels is the abandonment of a unilateral or bilateral approach to international trade regulation.

A second necessary condition, if an anticartel, free-market policy is to work, is systematic development of international investment. A relatively liberal flow of capital funds across national boundaries has always accompanied the growth of international trade. In fact, international lending and borrowing is complementary to international exchange of goods. Before World War I, however, international capital movements were generally from rich, powerful, industrialized nations to poor, weak, underdeveloped countries which often lacked political stability. To provide the essential financial security, governments of the lending countries frequently intervened in behalf of private creditors and laid down conditions that compromised the independence of governments in the borrowing regions. In the absence of any international regime for sponsoring these capital movements, colonialism and imperialism were perhaps inevitable. In any event, they gave a bad name to what was at bottom a sound and salutary development—the movement of funds from capital-rich countries to capital-poor countries.

Today, after two world wars, all countries except the United States, Sweden, Switzerland, and perhaps Canada are capital-poor. As the principal source of the funds available for rebuilding devastated Europe and upbuilding industrially backward countries, the United States has a peculiar responsibility. Under the right auspices, generous foreign lending can go far to create an environment within which private enterprise and free markets may have a chance to survive. Recognizing the special need for foreign investment, yet chary of the stigma of imperialism, the American Government has taken a momentous step away from the nineteenth-century system of international finance.[18] It has sponsored the creation of a United Nations financial agency specifically designed, first, to encourage international investment and, second, to channel the international

18. See Jacob Viner, "International Finance in the Postwar World," *Journal of Political Economy,* April 1947, pp. 97-107.

flow of capital into fields where it will be economically the most useful, instead of politically the most advantageous to the lender. It should be possible to develop international lending and borrowing under the auspices of the International Bank for Reconstruction and Development free from the taint of nationalistic bias or preference and ultimately to re-create the conditions favorable to a resumption of the international flow of private investment funds. At any rate, this is the purpose of the Bank and fulfillment of that purpose will go a long way toward providing the conditions on which an anticartel policy can succeed—both the political conditions for its acceptability by many foreign governments and the economic conditions for a high level of employment and steady prosperity, in which alone it is likely to be effective.

The third condition to an effective anticartel policy is a positive implementation of free enterprise and free competition in world markets. The survey of policies in Chapter 8 indicated in a general way the scope and character of the supplemental measures for making an anticartel policy effective. At a minimum, these include international monetary control, revision of the so-called International Convention for the Protection of Industrial Property (patents), and codification of rules on fair business practices, commodity standards, and corporate organization.

It would be idle to minimize the difficulties and perplexities of an attempt to resolve cartel issues, on any pattern whatever. The analysis of these issues in this study frankly leads to no neat and easy solution. Indeed, it leads rather to the conclusion that solvents are possible, but a solution impossible. It is a delusion to suppose that laissez faire could ever again be restored in international markets, or if it were restored that it would dispose of the cartel problem. It is no less a delusion to suppose that world government, and with it world economic unity, can be had for the asking.

A plenary program for either freedom of enterprise in international markets or a concertedly planned coordination of production and exchange among diverse national economies presupposes a degree of social solidarity and political comity that does not now exist. With not only Christendom but humanity divided and subdivided on the conception of man's destiny and the nature of the highest good, as they have not been since the sixteenth century, the prospects are

not encouraging for the early development of international economic policies adapted to the needs of modern economic life. Political discord in particular interposes formidable obstacles to economic cooperation. But the obvious and growing need for harmonious policies of trade regulation is a challenge this generation cannot well ignore.

If economic progress and political stability are to be realized, eventually the rule of law on a basis of common consent must coincide with the range of economic interdependence. Until the aspiration for peace and plenty overrides the ambitions and fears rooted in nationalistic rivalry, at best the world can only hobble along in ill-fitting political and economic institutions. Possibly in the twentieth century, as after the wars of the Reformation, a new Peace of Westphalia may release the creative energies of men from the thralldom of ideological strife and usher in a new era of concord and liberty. But in an atomic age time is running out. The blast of Hiroshima could be the clap of doom.

*Chapter* 12 [1]

# A CARTEL POLICY FOR THE UNITED STATES

RECURRENT EXCITEMENT about "the trusts" and monopoly has influenced American politics since the 1880's. The second world war introduced international cartels in the villain's role formerly played by domestic actors. Everyone heard of I. G. Farben, and its part in paving the way for Nazi aggression. Senate investigations, antitrust suits, and wide publicity brought cartel problems to the fore. Inside the government, wartime intelligence reports, the files seized by the Alien Property Custodian, and the Treasury's tracing of blocked accounts, all provided concrete evidence of practices that were previously suspected but not actually known. New facts were learned about how cartels worked and the masks they wore. Officials engaged in preclusive buying abroad and in the search for scarce materials encountered cartels in action. The war placed Americans at strategic points all over the world, and they learned many things they had not known before about how international business may be conducted.

Inevitably, "the cartel question" found its way into private and public postwar planning, and was considered more important than ever before. In September 1944 President Roosevelt said in a letter to Secretary of State Cordell Hull, "Cartel practices which restrict the free flow of goods in foreign commerce will have to be curbed." Mr. Hull replied that the State Department had been working on the subject for a year. The Interdepartmental Committee on Cartels and Private Monopolies brought together experts from State, Treasury, Justice, and other departments. This group, with the support of ex-

1. This chapter is a report of the Committee on Cartels and Monopoly appointed by the Trustees of the Twentieth Century Fund. Dr. George W. Stocking and Dr. Myron W. Watkins, assisted by a research staff, prepared an earlier volume entitled *Cartels in Action*, as well as the preceding chapters of the present book. The Committee herein presents its summary of this material and offers its recommendations for action.

pert staffs in various agencies, assembled facts, analyzed problems, commissioned special studies, and examined alternative policies which the United States might follow. The mood was anticartel; there was probably never any serious doubt that American policy would be to curb cartel activities. How to do it was the issue. The experts were on new ground; the traditional categories of foreign economic policy did not fit cartel questions very well.

In few countries was there such active opposition to cartels as in the United States; some governments were favorably disposed toward them. As policies began to develop, American officials watched anxiously for signs of changing attitudes abroad. For a while, it seems, they grew optimistic. Germany's defeat would break the back of many cartels. Those businessmen of the occupied countries who had collaborated with the Nazis seemed sure to lose their power and property after an Allied victory. Leftist sentiment permeated many of the European resistance movements. Governments in exile were talking of great economic reforms. But some evidence pointed the other way, and as the time approached for turning postwar planning into actual policies, optimism faded. It gave way to the feeling that only the United States was actively interested in curbing cartels, and that it would have to overcome the opposition of many governments to do it.

The Inter-American Conference at Mexico City in the spring of 1945 made joint action against cartels one of the points of the "Economic Charter of the Americas," on the suggestion of the American delegation.[2] In November 1945, at the time of the British loan agreement, the State Department published its *Proposals for Expansion of World Trade and Employment* with a fuller statement of American policy toward cartels. Later this document was elaborated in a *Suggested Charter for an International Trade Organization,* which became the basis for international discussions. (C or C, 343-44.) As we make this report, the negotiations for an ITO are still in progress, reaching what is expected to be their final stage at the United Nations Conference on Trade and Employment in Havana. In this report we have examined the international cartel problem with special reference to the policy set out by the United States as expressed both

2. See p. 287 of this book. In citing *Cartels or Competition?* hereafter, it will be abbreviated to C or C; *Cartels in Action,* to C in A. Arabic figures following these abbreviations are page references; roman numerals indicate chapter numbers.

in the ITO proposals and in other ways. We have put our conclusions in the form of recommendations as to the kind of policy we think the United States ought to follow.

We have used as a basis for our report the studies of cartel questions made for the Twentieth Century Fund by George W. Stocking and Myron W. Watkins. In the previously published volume, *Cartels in Action,* they presented case studies of some leading international cartels. In the previous chapters of this book they have analyzed these and other factual materials, discussed the character and effects of cartels, and explored alternative policies for dealing with them. The Committee has studied these two reports, discussed them with the authors, and weighed carefully the evidence and arguments they have presented. Without necessarily agreeing at all points with Messrs. Stocking and Watkins' analysis, the Committee shares their general approach to the cartel problem and their main conclusions.

## I. THE PROBLEM AND ITS SETTING [3]

In this report we have used the definition of cartels employed by Messrs. Stocking and Watkins. "A cartel is an arrangement among, or on behalf of, producers engaged in the same line of business, with the design or effect of limiting or eliminating competition among them. . . . The members [of international cartels] are located in, or do business in, two or more countries." (C or C, 3.) This definition is broader than that frequently used in economic literature but approximates the meaning the word has come to have in general use.

### *Growth of Cartelization*

Though cartel practices are old, the cartel movement is young. It is the product of a mature, not an infant, industrial society. It represents a rejection by businessmen and statesmen, after more than a century of almost reverent acceptance, of [Adam] Smith's obvious and simple system of natural liberty. . . . For more than a century, free competition set the pattern of the economic order that the peoples of Western civilization were building. Though never fully practiced anywhere, it constituted the banner under which they marched forward. . . . The free competitive market became, by common consent, the basic institution of nineteenth-century industrial civilization. [C or C, 5, 6.]

Although the forces of economic liberalism temporarily triumphed, their victory was short-lived. Counterforces were at work in both thought and practice. By the beginning of the twentieth century economists were question-

3. Much of this section consists of quotations from previous chapters.

ing the assumptions on which the logic of competition rested and humanitarians were questioning its end-product. . . . Both . . . recognized a sharp cleavage between economic reality and the competitive ideal. [C or C, 10-11.]

Before World War I business amalgamation and confederation in the major industrial countries had laid a basis for the development of a cartel movement on an international scale. Centralization of industrial control within national areas was a first essential. International markets cannot be stabilized so long as they are subject to the vagaries of intranational competition. . . . By the beginning of the twentieth century the trend toward combination had gone far in [all the principal industrial countries] . . . As companies or confederated groups that had established control over national markets went beyond their borders in search of customers they resorted to similar tactics for harmonizing rival business interests in the wider sphere. [C or C, 29-30.]

World War I did not liquidate the cartel movement. Indirectly it provided a powerful stimulus to more widespread and vigorous attempts to centralize control over industrial operations. Three principal postwar factors contributed to this development: first, a favorable climate of opinion; second, a radical maladjustment of productive capacity in many industries to market demand; and third, monetary instability that badly distorted price relationships between nations and industries. Doubtless the war alone did not create these factors, but it greatly aggravated them. [C or C, 32-33.]

The temporary and spotty prosperity of the twenties did not check the [cartel] movement. The Great Depression accelerated it. While the depression wrecked many cartels when declining demand tempted members to expand their individual sales by cutting prices, it also undermined a lingering faith in the efficacy of competition and brought new converts to the philosophy of economic restrictionism. These converts were perhaps most numerous among raw materials producers, whose economic significance in the aggregate was large but whose individual operations were in many lines relatively small and widely scattered. Lacking the cohesion essential to the development of private cartels, they turned to their governments for assistance. Where they were politically powerful they generally got it. [C or C, 68.]

### *Scope of the Cartel Movement*

Cartelization has gone furthest in the mineral raw materials industries. . . . The cartel movement did not stop, however, with the control of raw materials. It came to include a wide range of staple commodities or semifinished products that feed industrial plants making consumer goods. Among these are heavy chemicals, such as alkalies and acids for the paper and glass industries; pigments for paints; dyes for textile manufacture; lenses for spectacles, cameras, and scientific instruments; . . . Moreover, the movement also embraced many finished commodities sold directly to the final consumer—matches, thread, electric lamps, gasoline, photographic equipment, radio apparatus . . . [C or C, 91, 92.]

Cartels have also arisen in the public utility field. . . . Cartels have long

operated in the field of insurance . . . In investment banking, international syndicates for marketing government and even corporate securities have been common. . . . In truth, cartels have reached into practically every branch of the modern economy. [C or C, 92.]

Though no one can measure precisely the economic effect of any specific international cartel, and much less the effects of the entire movement, it is possible to indicate the scope of the movement in relation to the whole American economy before World War II. . . . in 1939, 86.9 per cent by value of mineral products, 47.4 per cent of agricultural products, and 42.7 per cent of manufactured products came to market under cartel regulation. . . . Restrictive market-regulating efforts that have permeated so broad and important an area of the American economy could hardly fail to affect such vital aspects of the economic process as standards of living, business stability, technological progress, and national income. [C or C, 92, 93, 97.]

### *Effects of Cartels*

Cartels are a business phenomenon. They are business expedients for business purposes. They tend to raise or support particular prices and so to increase profits or reduce losses of their members. They may also improve technical efficiency and reduce production costs—but only in so far as the cartelized firms stand to gain. Effective market control requires industry-wide cartel participation. This means that the vested interests of high-cost producers must be bolstered. The price of unity is some tolerance of wasteful methods of production, some solicitude for the economic misfits and weak sisters. Cost reduction is not a common and characteristic tendency of cartel operations, because businessmen, like other people, generally prefer the line of least resistance. It is easier for firms to make profits, and make them more secure, by boosting prices in unison than by reducing costs either together or independently.

Cartels tend also to stabilize their own markets. They tend to bring pricing under central control. And price making by a business bureaucracy is not very different from price making by a political bureaucracy. Procedures are necessarily by administrative rule, and precedent becomes ever more important. Cartel-regulated prices tend, therefore, to be rigid. Their inflexibility, far from making the economy as a whole more stable or ironing out business fluctuations, probably aggravates instability. Instead of averting or correcting economic maladjustments, cartels tend to freeze bad situations such as overexpansion and to promote new evils such as underinvestment. In stabilizing specific prices, cartels paradoxically tend to foster economic imbalance and to make the price system erratic. [C or C, 141-42.]

Finally, cartels tend to practice price discrimination. Some buyers are able, and willing if they must, to pay more for a product than others. To make all potential buyers pay as much as those whose demand is most pressing would be to cut off the patronage of those who are less able to pay, or who, at the high price, prefer some other product. In a cartel-controlled market it is not

necessary to forego profits from sales to either class of buyers. . . . Furthermore, price discrimination often arises out of business dealings among cartel members themselves. The offer of special, low prices to affiliated concerns is an effective way of promoting trade solidarity. Discrimination is also used to prevent competition from allied or closely related industries. All these cartel practices are, of course, far from consistent with the principles of "a fair field and no favors" and of "equal opportunity for all," which are the bedrock of a private enterprise economic system. [C or C, 142.]

Cartels tend not only to restrict the use of new techniques and processes, but to retard the introduction of new products they control if the new compete with the old. For profits from the new product may be realized, in part, only at the expense of smaller revenues from the old. And the gains from the new may not fully compensate for the losses from the old. In truth, they will not compensate unless the new investment yields a greater rate of monopoly profit than the old. [C or C, 223-24.]

Cartels thwart competition not only in the marketing of products but in the building up of productive capacity. Enterprisers in industries subject to monopoly control ordinarily stop investing before the marginal efficiency of capital, declining as investment expands, falls to the level of the current rate of interest. They do so because it is more profitable. By expanding his own investment a monopolist may undermine his monopoly position almost as effectively as would the appearance of a business rival. [C or C, 226.]

The new business philosophy leads to investment sluggishness in an age when the continuity of investment on a large scale is essential to a high level of employment and income. If society is to solve the linked problems of unemployment and low standards of living in a private enterprise economy it is imperative not only that new investment opportunities be continually created, but that the channels of investment, in new as well as old fields, be kept open and unblocked. If private enterprise does not use, freely and without hindrance, all the economical investment opportunities that the march of science makes available, the tightening noose on employment and purchasing power will strangle the economy. [C or C, 236.]

When cartels, whether publicly or privately administered, attempt to meet a cyclical decline in effective demand by restricting output and freezing prices they ignore the basic causes of economic maladjustment and trade recession. Such practices cannot prevent or reverse a downward trend of business activity. They may, indeed, increase the disorder of disordered markets and thus delay recovery. [C or C, 246.] Discretionary control of specific prices is in general an unpromising approach to the problem of industrial stability. [C or C, 253.]

## *Need for a Policy*

This analysis seems to the Committee to add up to a strong indictment. Cartels restrain trade and production, raise prices, and

deter investment; they foster the misallocation of resources, protecting uneconomic producers against competition. In short, cartels detract from the world's ability to create wealth, and impede the most desirable distribution of the wealth that is created. They substitute the conclave of private businessmen or government diplomats for the open market place as the source of decisions as to what shall be produced and where, on what terms and where it shall be sold.

Given the imperfections of the modern market, one can imagine an ideally run cartel that followed an enlightened policy yielding at once better long-run results for its members and better results for society at large than those which would prevail in its absence. But the evidence is all against the chances of such a cartel existing, and still more against the majority of actual cartels having any substantial resemblance to such an ideal cartel. By its nature a cartel represents primarily producers of a particular commodity or related group of products. Cartel members may benefit, but primarily at the expense of the rest of society. This is not to say that all cartels are equally bad. The economic effects of any given cartel depend on the importance of the trade it covers, its strength, its policies, and on the way production and trade would be organized if the cartel did not exist. Many cartels have failed, falling either to the competition of outsiders or to the inadequately suppressed competition among members. But the cartel mortality rate has not been high enough to warrant dismissing the problem on the ground that it will cure itself. On the contrary, the strength of the forces making for cartelization is impressive.

Concern over the dangers of cartels is not enough. Opposition to cartels will be ineffective unless it finds expression in workable governmental policies. Before we examine the components of such a policy, its American context needs brief sketching.

### *The United States, Anticartelist?*

The United States has taken the lead in urging on the world an international agreement to curb cartel practices in international trade. This action is at once logical and ambiguous.

The logic proceeds from the pattern of American foreign policy as a whole. Abandoning the aloofness toward the affairs of the rest of the world that it has so frequently shown in the past, the

United States Government—with, so far, considerable popular support—has recognized, explicitly and in action, that the economic fortunes of this country are, for better or for worse, closely tied up with those of the rest of the world. Parallel with official acknowledgments of American responsibility for helping to create and maintain world order and peace have been others acknowledging America's stake in the rebuilding and strengthening of the world economy. So the scope of American foreign policy is wide. It would be patently unwise to exclude from it the question of cartels. For cartels not only affect the wealth and welfare of mankind; as economic and social institutions, they help to shape cultural aspirations and to determine what values society actually realizes. By strengthening some groups and forces and weakening others, cartels inevitably influence the internal "political" affairs of nations and their diplomatic relations. To lack a cartel policy would be to ignore part of what we profess to recognize.

More precisely, a policy toward cartels is required by the logic of the economic foreign policy put forward by the United States. Through the Bretton Woods Agreements, the Food and Agriculture Organization, the Economic and Social Council, the proposed International Trade Organization, and by other means, the United States along with other countries has sought international cooperation on economic problems as it did not after the first world war. In their different ways, these organizations are supposed to raise living standards; as a means of doing so, they look toward the removal of barriers to the production and international flow of goods and capital. Obviously, to ignore cartels in this context, and to limit action to the removal of governmental barriers, permitting private barriers to continue or even to replace governmental barriers, would be what a Department of State publication calls "high-level shadowboxing." [4]

So the logic of the call for an international agreement to curb cartels stems clearly from American foreign policy as a whole. The ambiguity comes from American institutions.

4. There is a large literature, principally European, expressing the view that cartels offer the opportunity of stabilizing the world economy, improving international economic relations, and fostering peace. We consider that the analysis set out in previous chapters of C or C effectively rebuts the first two points. Without going thoroughly into the matter, it seems clear that the third point is at least dubious and probably wrong.

These days many Americans see themselves as the lone proponents of free private enterprise in a socializing world. The emphasis on *private* enterprise is accurate enough for most of the American economy. The use of *free* is questionable. When American businessmen use this word, they usually mean "free from governmental interference." But if the word is read in the historical context of economic liberalism it connotes also free competition among businessmen and the effective (as well as legal) freedom of newcomers to enter any field of enterprise. With that meaning, the generalization that free enterprise flourishes in the United States is misleading. "Producers . . . have not been willing to abandon private enterprise, but they have contrived to make it less free. . . . Right up to the outbreak of World War II . . . the trend of American economic policy and industrial organization was toward increasing concentration of control." (C or C, 46, 144.) Many important sectors of the American economy are either effectively monopolized or subject to what economists call "imperfect competition" among a few giant companies. This means that within the borders of the United States exist many of the conditions which the proposed policy of international action to curb cartels seeks to end in international trade. Considering the great importance of American production and trade to the world economy, the characteristics of the United States economy are bound to leave their mark on the world's economic structure.

So the United States presents two faces to the world: a policy aimed at curbing cartel practices, and an economy with important monopolistic elements. There is no question of the honesty or the consistency of intent of the American government officials responsible for the cartel program. The question is whether the internal structure of the American economy will further or hinder the curbing of cartel practices in international trade and production.

Against this background, we may look more closely at the kind of policy the United States ought to follow with regard to cartels.

## II. BASIC POLICIES

Faced with the existence of cartels, a government may choose among five general types of policies in deciding its basic approach. (C or C, VIII.)

*Laissez faire* is the policy of doing nothing. A government

choosing this course will not take steps to check the growth of cartels, nor will it deliberately adopt measures to help them. Such a policy involves acceptance of cartels and monopoly because, unchecked, the forces which have led to the present degree of cartelization will almost certainly continue to operate. Laissez faire means abstaining from governmental control of this aspect of economic change, leaving the decision to businessmen—and other governments.

Even if a government intends to follow a laissez-faire policy toward cartels directly, it is likely to help or hinder them indirectly by the policies it adopts in other matters. Tariffs, subsidies, patent laws, railroad rate structures, all affect the character of trade in one way or another, and if not specifically directed against cartels, they generally help them. The same result will come about if a government, while not intentionally ignoring the cartel question, in fact fails for whatever reason to carry out a definite policy in this field. International dealings push events in the same direction. As *Cartels or Competition?* points out, "Unless governments cooperate to curb or regulate cartels, they will probably act separately to encourage them" (263).

*Deliberate encouragement* of cartels may be practiced in many ways. A government convinced that cartels are a desirable form of economic organization may foster their growth, for example, by giving cartel decisions the force of law. It may hinder foreign competition by tariffs, and in other ways draw on public wealth to aid private concentrations of economic power.

*Acceptance* of cartels, and the attempt to *regulate* them in the public interest, is a third possible policy.[5] The *acceptance* may come from the conviction that cartels are useful, or from the conviction that they are unavoidable, or simply from the inability or failure of the government to eliminate them, even if it would like to. The authors of the staff studies have found that most American advocates of this kind of policy "contend that the forces making for cartelization are too powerful for an American policy to control singlehandedly." (C or C, 271.) The *regulation* may be slight; it may even

5. Some kind of regulation is a part of any but a laissez-faire policy toward cartels. The kind of regulation we are discussing here is one that aims to limit the range of choice of cartel managers in deciding on cartel policies. Such regulation is always coupled with acceptance, even if reluctant, of the continued existence of cartels. See C or C, VIII, for an account of some registration proposals.

protect cartels, intentionally or otherwise, against hostile legislative or public opinion. Alternatively, a government that in general opposes cartels may try to regulate them quite stringently. It may seek to put serious limitations on the cartels' freedom of action, and to check their exploitation of the public.

The danger in any policy of regulation is that administrative difficulties, the steady pressure of cartel groups, and resultant compromises dictated by political expediency will pervert the original purpose of strict regulation. Even from the point of view of a government favorable to cartels, some regulation in the public interest would usually be necessary. From the point of view of a government generally opposed to cartels, regulation must be second best to elimination; to regulate is a lesser evil than to do nothing.

*Nationalization* destroys private domestic cartels and monopolies, substituting a government monopoly for them.[6] The justification for this change is that governmentally run industries are supposed to operate for the general welfare, not for private gain, and that it is better to have economic decisions of far-reaching public importance taken by responsible political organs than by monopolistic private groups. Checking or disrupting cartels by nationalization leads, of course, to mixed national economies with some segments governmentally owned and others privately owned. Nationalized industries participating in international cartels tend to behave like private cartel members. (C or C, 283-86.) So this policy, in effect, side-steps the basic issue. Indeed, government participation, by adding to the available sanctions, may strengthen cartels and reduce the challenge of competition from outsiders. On the other hand, if important nationalized industries leave the international group, this will tend to weaken the cartel, for it must meet the competition of governments. If nationalization spreads, intergovernmental cartels may supersede predominantly private cartels, or competition between state monopolies may result. New problems then arise—those of a state trading world—that are beyond the scope of the present report.

If the evils of private cartel practices continue to spread, with no

6. Not necessarily completely, since the nationalization may extend only to the cartelized part of the industry, leaving the government in competition with other private firms. Also, the socialization may be below the national level, leaving provincial-, worker-, or municipal-owned enterprises in some degree of competition. But the tendency is to adopt complete nationalization, or to eliminate competition among the socialized industries as wasteful and unnecessary.

effective intergovernmental checks, it will strengthen the general movement for nationalization. If businessmen fail to recognize that elimination of cartels may be a necessary price for continuation of private enterprise, by their cartel affiliation they may become, in effect, brothers-in-arms of socialists and communists.

*Breaking up cartels and fostering competition* is the fifth policy a government may choose. This approach assumes that, with possibly a few exceptions, cartels are bad and ought to be eliminated. The first step is to dissolve existing cartels, substituting independent decision making for concerted action. The next step is to suppress the business practices that lead to monopolies and that keep competitors from entering the field.[7] These are the solutions sought by the antitrust laws of the United States. As they now stand they are inadequate and inadequately enforced.

For full effect such a policy must have a positive side too, one which directly fosters competition as well as checks monopoly; otherwise it is like sickling weeds. To foster competition requires government action on a wide front, and by many instruments. Trade-mark and patent laws, rules governing business organization, money, credit, and tax policies, tariffs and other foreign trade controls, governmental purchasing procedures, are all involved. Competition must be fostered not only by breaking up monopolies in certain lines, but also by preventing the growth of concentration in other lines.

To be an effective instrument of industrial government, competition must pervade a large part of a nation's economy; limited to a few segments it may work badly and deserve to perish. To impose competition on a few industries while permitting monopoly to rule the economy as a whole is to lay a curse on these sections of industry. Similarly, free competitive trade at home and cartels abroad, or vice versa, make a poor combination. The two patterns are incompatible. Both are dynamic; they encroach on one another. There is no simple way to determine which will triumph, but experience shows that, under modern conditions, if governmental policy does not foster competition it is likely to give way to economic concentration and private monopoly.

7. Many other factors besides cartel restrictions may deter new enterprises from entering a field, for example the heavy initial investment required and the high risk where a few giant mergers dominate the industry.

*Choosing an Approach*

Distinguishing these five policies helps analysis; it does not precisely describe the real world. Governments rarely follow a pure and universal gospel. Their policies are more likely to be eclectic, shaped by a mixture of forces. Indeed, in many circumstances, a combination of some of the policies outlined may be the best way to meet cartel problems. The important thing is that governments fit them together in a complementary and not a contradictory manner. Blends of some of these approaches are to be found in the policies of most governments. A government bent on checking the influence of cartels may try to break up some, regulate others, and nationalize some cartelized sectors of the economy.

Or a government may lack a policy. It may do something here, another thing there, each affecting cartels but not adding up to a coherent cartel policy. Inaction may result from failure to understand a problem, or from political or administrative inability to cope with it. A government's policy toward different sectors of the economy may be guided by different goals, or perhaps just by different people with rather different values, different degrees of vigor, and subject to different pressures. The strength of the movement toward cartelization makes clear that if a government lacks a consistent and effective policy *against* cartels, its actions are likely to work *for* cartels.

For the reasons set out in Part I, we believe that cartels damage the world economy, and the Committee therefore rejects policies that encourage cartels, whether deliberate or the result of laissez faire. The familiar pros and cons of nationalization are not rehearsed here. Whatever its merits, it seems to us clear that this is not likely to be the first choice of the United States as a means of dealing with the cartel problem. Should other measures fail, the problems involved in nationalization and the prospects it offers will need, and undoubtedly will get, fuller consideration. In many foreign countries, on the other hand, nationalization is likely to be used in any drive against cartels. While nationalization can eliminate domestic private cartels, its effect on international cartels may vary within a wide range, as we have pointed out above.

If it can be successfully carried out, the policy of breaking up cartels and fostering competition would offer the best prospects for

the United States. There are many difficulties, not least those lying in our domestic economy.[8] Great optimism is not justified, but we may be hopeful of the results of an energetic policy following these lines. As a practical matter—and, indeed, to strengthen the policy—regulation intended to curb domestic monopoly is a necessary adjunct to the cartel policy here proposed.

The detailed recommendations that follow apply this general view to specific problems. As far as possible, the United States should seek the elimination of international cartels. When this is impossible, the aim should be to keep an effective curb on cartels and restrictive practices. Coupled with action against existing cartels should be measures to prevent the growth of new ones. Success in these purposes requires a complementary policy of promoting, by every appropriate means, vigorous competition in domestic and world trade.

### *Other Parts of Public Economic Policy*

Cartels are but one form of obstacle to the efficient creation and equitable distribution of wealth. Poverty, ignorance, perverse governmental policies, and outmoded social organization also hold back production and trade. It is important to curb cartels, but it is not the whole job. Failure to deal with other obstructions to the production and the proper distribution of wealth would nullify a successful anticartel policy. To be fully effective, an international anticartel policy must be coupled with concerted international action to reduce tariffs and other trade barriers, to encourage international investment, and, if possible, to check depressions. The effectiveness of these policies, in turn, will be increased by a successful policy of curbing cartels.

International cartels present only one aspect of a more basic problem: the concentration of private control of the economy. Domestic monopoly must also be dealt with, if the fullest results are to be obtained from an anticartel policy. If the United States is to urge on the rest of the world an active policy to curb international cartels, the government must match it with a strong antimonopoly policy at home. Otherwise, as Europeans validly argue now, the United States

8. When Messrs. Stocking and Watkins have completed their third volume, dealing with domestic monopoly problems, the Committee expects to issue a report on this subject. Therefore, statements in the present report bearing on domestic problems are tentative and subject to revision after fuller study.

will seem ready to smash the cartel agreements so prevalent abroad but quite prepared to leave the world exposed to exploitation by giant American corporations which often represent a more formidable concentration of economic power. Europeans and Occidentals join Latin Americans in accusing Yankees of hypocrisy, for damning the form of monopoly most common abroad while ignoring a domestic type of business organization that in substance amounts to the same thing. Beyond that, with the United States accounting for as large a part of the world's production and trade as it does, it would be very hard, if not impossible, to secure effective competition in international trade while permitting monopolies to grow in the American economy.

## III. THE INTERNATIONAL TRADE ORGANIZATION

The State Department's *Proposals for Expansion of World Trade and Employment* is a key document in the history of United States policy toward cartels. The *Proposals* called for the creation of an International Trade Organization and sketched the principles of an international agreement covering tariffs and other forms of governmental trade barriers, restrictive practices carried on by private business, and intergovernmental commodity agreements. Later the State Department elaborated these principles in a *Suggested Charter* for an ITO, which was the basic working document at the first session of the Preparatory Committee of the United Nations Conference on Trade and Employment at London, in the fall of 1946. (C or C, 343-45.) The Preparatory Committee held its second session at Geneva during the summer of 1947. Out of these discussions has come a draft charter for an ITO to be submitted to the full world conference which, as we make this report, sixty-three countries are preparing to hold in Havana, starting November 21, 1947.[9]

### *Proposed Charter*

The Draft Charter covers a wide field. Besides trade regulation, it includes proposals for dealing with such problems as the main-

9. *Draft Charter for the International Trade Organization of the United Nations*, Publication No. 2927, Commercial Policy Series 106, Department of State, 1947. To facilitate study of this important document we reproduce Chapters V and VI of the Draft Charter as an Appendix to our report (Appendix A). In the remainder of this chapter, references to the Draft Charter, unless otherwise stated, mean the Geneva draft as set forth in the State Department's Publication No. 2927. In citing it we shall abbreviate the title to DC.

tenance of full employment, the development of backward areas, and the encouragement of international investment. There is much room for argument about the ways these subjects are handled, and the relative importance assigned to each. But an important fact stands out: cartel policy is in its proper setting as one of a series of means by which to attain the kind of world that will raise living standards everywhere. Cartel policy is not neglected; nor is it left to stand alone.

Though the term "cartel" nowhere appears in the Draft Charter, Chapter V deals directly and specifically with the subject. This chapter and Chapter VII provide: (a) a broad undertaking by governments to check restrictive business practices under certain circumstances (DC, Arts. 44 and 47); (b) the establishment of an international body to deal with cartel matters (DC, Chap. VII); and (c) a procedure for deciding when to take corrective action and what corrective action is appropriate (DC, Art. 45).

The *broad undertaking* is the pledge by each government to "take appropriate measures . . . to prevent business practices affecting international trade . . . which restrain competition, limit access to markets, or foster monopolistic control, whenever such practices have harmful effects on the expansion of production or trade and interfere with the achievement of any of the other objectives" of ITO. (DC, Art. 44, Par. 1.)

The *international body to deal with cartel matters* is ITO itself. (DC, Chap. VII.) It is charged to investigate complaints and recommend remedial action. (DC, Art. 45.) The ITO may also arrange conferences on restrictive practices, conduct studies of these problems, and recommend to member countries relevant changes in their laws and procedures. (DC, Art. 46.) Functioning in this way, ITO should become an international center of great competence for dealing with cartel questions.[10] It will accumulate a body of knowledge and experience that, if properly used, will make possible much more effective governmental action on cartel matters than hitherto. The right of member governments to propose special studies and to ask ITO to call conferences means ITO will serve as an international forum for threshing out cartel issues.

10. Within ITO there will presumably be a Business Practices Commission to handle the Organization's cartel work. Specific mention of the Commission was dropped at Geneva, after appearing in previous drafts. See DC, Chap. VII, Arts. 79 and 80.

The *procedure* by which ITO will operate is crucial to an understanding of the proposed Charter, because through it will be decided the real meaning of the sweeping pledge to check restrictive business practices. Any member government may complain to ITO about specific business practices which "have or are about to have" the prohibited effects. (DC, Art. 45, Pars. 1 and 2.) If, after a preliminary scanning, ITO decides a prima facie case exists, it will investigate the matter, hold hearings, and call on members to submit data. Then, if it decides that the practices complained of did, do, or are about to, frustrate the Organization's purpose, ITO "shall request each Member concerned to take every possible remedial action" and may also recommend specific remedial measures. (DC, Art. 45, Par. 8.)

Complaints may concern such practices as price fixing, division of markets, use of sales or production quotas, discrimination against firms, agreement to suppress technology, misuse of patents or trademarks, or any similar practices that ITO decides are restrictive business practices. (DC, Art. 44, Par. 3.) The practices complained of may be those of a single private enterprise, a public commercial enterprise, or groups of either or both of these kinds of enterprises acting in concert, provided such enterprises or groups "possess effective control of trade between two or more countries in one or more products." (DC, Art. 44, Par. 2.)

Actual decision on complaints and recommendations for corrective action will probably be made by the Executive Board of ITO, composed of representatives of a number of governments, rather than by a subsidiary body of experts, such as the proposed Business Practices Commission. (DC, Arts. 75 and 78.) Nevertheless, members of its permanent staff will presumably recommend action to the Board. (DC, Arts. 82 and 83.) If, over the years, the professional staff performs its functions well, it may be able to insure uniformity and continuity in ITO policies, thus building up, in effect, an international common law of restrictive business practices.

### *Weaknesses of ITO*

The ITO project clearly marks progress in dealing with international cartel problems. Explicit recognition of the need for an international agency to prevent private trade practices from interfer-

ing with full use of the world's resources is a new development. The broad obligation which countries joining ITO take to prevent or end restrictive practices that the Charter condemns is a promising advance; the procedure for handling particular cases seems reasonable and no more unwieldy than is inevitable in international dealings.

So ITO is a step in the right direction, and deserves strong American support. At the same time, it is only a first step and Americans should know its weaknesses, the loopholes in the agreement, the places where failure may appear. Otherwise United States policy is likely to be faulty and inadequate, and the American public may become cynical about an agreement from which it expected too much.

*A Basic Weakness*

The basic weakness of the ITO Charter is that it does not outlaw cartels or any restrictive business practice as such. It condemns restrictive practices only when they frustrate the purposes of the Charter, and in every case of alleged trade restriction it will be for ITO to decide after investigation whether the facts do amount to a frustration of the Charter's purposes. Action will be on a case-by-case basis, so that condemnation of one cartel's price fixing, for instance, need not affect another cartel engaged in the same activity. The process of administrative rule making is likely to be slow. Evidence has to be collected, problems have to be studied, issues debated, both sides heard. Moreover, though a subsidiary commission of experts may conduct the hearing and make the studies, final decision will rest with the ITO Executive Board, composed of government representatives. These professional diplomats will rarely be able to consider a cartel issue on its merits alone, without regard for other pending international issues. An unbiased attitude and a judicial atmosphere can hardly be counted on.

In short, further agreement among governments on specific issues is necessary to give concrete meaning to the Charter. But this will not be the same kind of agreement that has been reached so far on the ITO Charter. That agreement had to be virtually unanimous or the Charter could not come into effect. In condemning specific instances of restrictive business practices, ITO will presumably act by majority vote and to that extent agreement should be easier. Also, members unwilling to subscribe to a general prohibition of cartels

or an unqualified prohibition of specific restrictive practices will probably vote against particular cartels, or concrete instances of restrictive practice by others, when these damage their interests. This works both ways, of course, and a government professing general opposition to restrictive practices may find them excusable when its own people appear to benefit from them. But as a general rule the countries that feel injured by a specific instance of trade restriction will outnumber the countries participating in the restriction. Therefore adverse majorities are likely in votes on specific complaints.

The history of the ITO chapter on restrictive practices helps one to understand the difficulties ITO will face in dealing with cartel questions. The American *Suggested Charter* would have prohibited restrictive practices in general, on the ground that they necessarily frustrate the purposes of ITO. It listed a series of practices (virtually the same as those specified in DC, Art. 44, Par. 3) which were presumed to have that effect, unless the contrary could be shown in any given case. The American view, in short, was that restrictive business practices are almost always bad. "On the other hand," says the report of the London meeting, "some delegates perceived considerable advantages in their wise use, particularly in introducing stability in industries requiring large investment and depending mainly on external markets. It was also urged that restrictive agreements were frequently accompanied by exchanges of technical information which facilitated establishment of new industries in the less industrialized countries."

Because so fundamental a cleavage of views clearly blocked any meaningful compromise on issues of substance, the conferees resorted to the present provisions. Under the Draft Charter, ITO will be obliged, in effect, to apply a "rule of reason" to each instance of alleged restriction, judging practices by their effects, not by their form. Perhaps it will prove easier to reach agreement on specific issues than on general principles, but this compromise again underlines the fact that the ITO Charter is only a beginning.

### *A Second Weakness*

A second weakness of ITO, from the point of view of those seeking strong action against cartels, is that when it has condemned a specific instance of restrictive practice and recommended action

against it, even member countries are not bound to accept these recommendations. Each member must "take full account" of them "and, in accordance with its system of law and economic organization, take . . . the action it considers appropriate having regard to its obligations" under the Charter. (DC, Art. 47, Par. 4.) Thus the ultimate decision as to what shall be done rests with the member governments directly concerned.

The American draft had called on countries to "take action" on ITO's recommendation. Reporting on the London meeting, the American delegation has explained that some governments, with powers of direct intervention in industry, felt that this bound them to accept all recommendations by ITO, while other countries, such as the United States, whose actions against their own citizens are subject to "due process of law" would not be obliged to carry out the recommendations. "For example," says the report, "before even a *prima facie* case could be made out by the United States Government against an American firm allegedly participating in restrictive business practices, it would be necessary for the Attorney General to submit evidence to a Grand Jury for its decision. Neither the Grand Jury nor the courts could be bound to accept the findings of the International Trade Organization as to the effect of such practices upon American commerce." More generally, it has been argued that it is impossible for countries having such widely differing forms of economic, social, and political organization as the presumed members of ITO to bind themselves to accept and carry out the decisions of an international tribunal dealing with specific instances of restrictive business practices.

These arguments have force; consideration of them reveals a serious weakness in ITO's procedure. Perhaps this is inevitable in an organization that must deal with cartels at second hand, through sovereign states, instead of by direct measures binding on individuals and corporations. Though members need not accept ITO recommendations, they have an obligation to do something about condemned practices. They have pledged themselves to take appropriate action, on recommendation of ITO, to correct specific instances of restrictive trade practice. Moreover, each member agrees to "take all possible measures by legislation or otherwise to ensure, within its jurisdiction, that private and public commercial enterprises do not engage in

practices" which frustrate the purposes of the Organization. (DC, Art. 47, Par. 1.) But the somewhat ambiguous terms in which Chapter V of the Charter defines members' obligations give rise to a suspicion that in accepting these obligations a good many countries may have had tongue in cheek, each believing that in practice such terms can be made to mean about what that country wants them to mean.

Differences among countries in their attitude toward cartels provide ground for the fear that some ITO Charter provisions will have almost as many meanings as there are ITO members. "In no other nation is traditional hostility toward combinations in restraint of trade so marked as in the United States . . ." (C or C, 287.) A review of the institutions and practices of many countries shows that even countries likely to be relatively heavy losers from cartels, such as most of the Latin-American nations, tend to tolerate or even foster them in one way or another. And so far as Europe is concerned, "current trends point to an even greater measure of collective action than prevailed before the war." (C or C, 289.)

### *Offsets to ITO Weaknesses*

Public opinion is ITO's principal sanction for enforcing its decisions on cartel matters. "As soon as possible after its proceedings in respect of any complaint . . . have been . . . closed, the Organization shall . . . publish a report showing fully" its findings and recommendations. (DC, Art. 45, Par. 10.) Every member to which ITO has addressed a recommendation must report on what it has done to end the condemned practice, or on its reasons for not complying with the recommendation. (DC, Art. 47, Par. 5.) Finally, ITO is required to publish members' reports on remedial action; and if a government fails to report, or reports that it has done nothing, ITO may call the delinquent government into consultation. (DC, Art. 45, Par. 11, and Art. 47, Pars. 5 and 6.) So public opinion is brought into play, both on cartels and on governments.

We believe this procedure can be strengthened in two ways. ITO recommendations for action against a condemned cartel practice should request the governments affected to report on what they have done within a specified period of time, say six months. On receipt of these reports or at the end of the time limit, ITO ought not

merely to publish the reports or announce the failure to report but to publish also its own analysis of the action taken or the failure to take action. An unequivocal statement setting forth ITO's judgment on whether and how far the governments addressed have complied would provide a check on whether the inaction, or partial compliance, of a country not following the recommendation had prevented elimination of the condemned practice. It would also provide a basis for judging the appropriateness and the adequacy of the original recommendation. Once it has condemned a specific restrictive practice, ITO should not rest until the practice has been discontinued. But ITO should learn from experience the most suitable methods of stopping particular practices.

We believe that the cartel provisions of the Draft Charter are defective. Whether the defects prove fatal depends primarily on the policies of member governments. The weaknesses reflect the lack of agreement among nations on the desirability of curbing cartels. One could easily draft a much tighter agreement; it would not be widely accepted. If the United States rejects the Draft Charter, it will get, not a better agreement, but a looser one, or perhaps no agreement at all.

The right course for the United States is to support the adoption of the Charter, to adhere to it, and to try to improve it. In cooperation with others if possible, alone if need be, the United States can also make use of its strongest weapon—vigorous national action to curb cartels and foster competition.

*Making ITO Work*

Essentially, the ITO project puts in question the propriety of restrictive business practices and provides machinery for determining what to do about them and when to do it. A vigorous American policy can help to make the machinery work.

First, the United States should strictly fulfill its obligations under Chapter V of the Charter. Among these obligations are those of providing ITO with information required for cartel investigations and for action on complaints and of taking part in international conferences called by ITO to deal with special problems. (DC, Art. 47.) If to carry out these or other obligations requires legislation or advance administrative action, the United States should take these

steps promptly so that it will not be responsible for delaying or hampering the effective operation of ITO.

When ITO recommends action to curb cartels, the United States should be prepared to follow these recommendations as closely as possible. This means that at times the government will carry out in good faith recommendations that its representative on the ITO Executive Board had voted against. As the original sponsor of ITO it would be especially unseemly for the United States to look for loopholes to escape its obligations.

The United States can and should strengthen ITO machinery and help the new organization in many incidental ways. To assemble a competent staff for ITO may prove difficult, and the United States should help in recruiting it. As cartel cases come to ITO, the American representative ought to press for as rapid action as is compatible with full consideration of the case. When it knows of serious violations of the Charter, the United States Government ought to file complaints, but not in such number as to swamp the young organization. In ITO the weight of American influence should be on the side of a strict interpretation of the rules and clear, strong recommendations likely to be effective. The inclusion of cartel provisions in the ITO Charter was a victory for American policy; but the victory will be lost unless the machinery works.

### *An Agenda for ITO*

The use of ITO machinery for reviewing complaints does not exhaust the possibility of international action in this field. The Charter charges the Organization with studying cartel problems, holding conferences on particular issues, sponsoring negotiations between states, and making recommendations. (DC, Art. 46.) The drafting of model statutes and international conventions seems to be covered by these instructions. In order further to check cartel activities, the United States ought to take the initiative in proposing specific problems for study in preparation for international conferences to consider them. We recommend that ITO undertake as soon as possible a study of the following issues.

*Patent reform.* Control of patents is at the heart of many restrictive business practices. "On its face a patents and processes agreement may be nothing more than an undertaking between two independ-

ent business enterprises whereby each will share with the other its exclusive rights in patented or secret technology. In practice such exchange agreements have frequently become the means of eliminating competition between the parties." (C or C, 291; see C in A, VIII and X.) An effective cartel policy must be supplemented by "measures for insuring a wider and fuller use of technological improvements. It would be necessary drastically to limit the use of patent privileges as instruments of market control." (C or C, 291.) While members of ITO may file complaints against specific instances of the use of patents to restrict trade or production or to suppress technology, the subject is of such great importance that more fundamental reforms are desirable.

The Union for the Protection of Industrial Property, of which the United States is a member, embodies rules reflecting a wide area of international understanding on patent matters.[11] The rules in force under the latest Union agreement negotiated at London in 1934 insure nondiscrimination between citizens and foreigners in the issuance of patents, protect the interests of patent-holders, and check some kinds of abuse of patents. The line dividing the field of interest of ITO from that of the Union is not clear; they might jointly sponsor a conference to deal with patent problems. To aid ITO in curbing restrictive business practices, it would be desirable to amend the Union's basic Convention so as to limit the power of patentees to impose restrictions on a licensee's production, prices, or market territory.

One of the tasks of an international patent conference would be to recommend changes in national patent laws that would discourage the use of patents as a basis for cartel agreements. A frequent proposal is that patent-holders be required, unless they exploit their patents within a specified time, to offer them for nonexclusive licensing at a reasonable royalty to all responsible parties. Sometimes compulsory nonexclusive licensing, not conditioned on failure to work the invention, is recommended as a partial remedy for the monopoly problem. (C or C, 291-95.) A number of countries, including some in which cartels flourish, have compulsory licensing laws. Exploration of the implications of the proposal and study of the opera-

11. See *Protection of Industrial Property,* Treaty Series No. 941, Department of State, 1939.

tion and administration of such laws would be an important part of ITO's study of this problem.

The international exchange of technical information is of the greatest importance to the advance of technology. Unfortunately, past agreements providing for the exchange of research data and of patent privileges between private companies have usually also contained provisions limiting the output, prices, and sales territory of each party. (C in A, IX, X, and XI.) Some degree of restriction may be inevitable in the private exchange of technological information, but ITO should make the utmost effort to devise means by which the restrictions can be kept to a minimum. Allied measures to expand the international exchange of technological information on a nonmonopolistic basis clearly fall within ITO's jurisdiction. Increased governmental and government-sponsored research, nonexclusive licensing of government-owned patents, intergovernmental exchange of patent information, including data on the international patent agreements of their nationals, all offer hopeful means of progress in this field.

*Registration of international business agreements.* One of the most common suggestions for checking cartel activities is the compulsory registration of international business agreements. Some of these proposals provide for varying degrees of publicity to accompany registration; others would keep the data confidential. Sometimes the registration idea is coupled with the proposal that a government may give advance approval to the agreement, or suggest changes to make it conform to the public interest. The Draft Charter specifies registration as one of the subjects ITO may study. (DC, Art. 46.) As a means of supplying data for ITO investigations, registration might prove useful. However, experience with registration in European countries indicates its futility as a regulatory measure. (C or C, VIII.)

It is extremely difficult to draft a law which, while covering all significant types of agreement, does not cover so many kinds that filing becomes a heavy burden on companies subject to the law and the material filed a veritable flood overwhelming the registration bureau. However, this presents an opportunity for a study of comparative law and for skillful legislative draftsmanship. Even if large quantities of useless material—useless, that is, as an aid in checking

restrictive practices—were filed, sifting it would probably be worth the effort. We recommend a study of the registration device with a view to the adoption of the best system that can be devised. Member governments might set up such a bureau jointly, under ITO auspices, or take parallel action separately on the basis of a model statute.

*Corporate powers and intercorporate relationships.* The modern corporation is at once a phantom and a sleight-of-hand artist. It has many guises and can project itself into far places in strange forms. Somewhere along the way it may become all but impossible for the outsider not privy to the ledgers, legal papers, and safe-deposit boxes to know with whom he is dealing. Some international cartels and combines have used many devices to conceal the nature of their operations. We agree that "Unless public authority somehow learns to unravel the network, the modern business corporation will grow into an ever more menacing instrument of market control . . ." (C or C, 297.)

Successful international action to check restrictive practices depends on knowing who is doing what, and particularly on knowing where the real power to make decisions lies in every firm. One approach to this problem that has been suggested is the simplification of business structures, perhaps by limiting the number of holding companies allowable in a single enterprise, as the Holding Company Act does for American public utilities, or by restricting the acquisition of voting stock by one company in another company in the same line. Some advocate federal incorporation for American firms above a specified size and engaged in foreign trade. (C or C, 297.) Another approach would require full disclosure to stockholders of the ownership interests in a corporation of its officers and directors, and of all their direct or indirect gains or losses arising out of corporate transactions or out of transactions in the corporation's securities.

We endorse the suggestion of "international cooperation through the United Nations to insure the registration and complete disclosure of the ownership and control of, as well as the financial relations among, all corporations engaged directly or indirectly in international trade." (C or C, 297-98.) Disclosure would promote simplification, since obscuring ownership is one of the motives for complication. To pierce the corporate veil is difficult because the laws of many countries screen different parts of the network and these laws are often

conflicting. Hence any effective attempt to deal with this problem will have to be by means of international action. ITO can make a start by separating the promising from the hopeless approaches.

*Additional control measures.* Although governments have so far been unable to agree on barring any specific cartel practice as such, ITO may eventually obtain agreement on some definite limitation of cartel activities. For instance, if two firms in different countries made an agreement assigning a third country to one of them as an exclusive market, they might be required to get the consent of the government of that country. While such a rule would fall far short of adequacy, it would put greater limits on cartels than now exist. We believe that ITO ought to study the feasibility and implication of adopting rules of this kind. If the results of such study are promising, ITO should call a conference to formulate such rules. By prohibiting a series of specific practices, ITO would in effect be creating an international commercial code.

This sketch of an agenda makes it clear that much remains to be accomplished after ITO is set up. Whether ITO realizes its potentialities does not depend on the will of an independent international body. It is only governments, acting through and for ITO, that can bring about the desired results.

## IV. NATIONAL ACTION BY THE UNITED STATES

The United States, acting alone, may be able to do more in the near future to curb cartels than can ITO. For it leads all other countries in production and trade. By its deliberate act—and by its failure to act—the United States can influence the economies of other countries in many ways. And American policies can have a strong impact on international cartels. As Professor Ben Lewis has said, "Maybe we can't destroy 'em, but we can certainly mess 'em up!" (C or C, 291.)

The ITO Charter specifically provides (DC, Art. 49) that "No act or omission to act on the part of the Organization shall preclude any Member from enforcing any national statute or decree directed towards preventing monopoly or restraint of trade." [12] The fact that

12. Presumably this provision does not relieve a country from any of its obligations under other provisions of the Charter. For instance, a government could not use an import quota to combat a cartel if that action would be in conflict with the Charter's provisions governing quotas. (DC, Chap. IV, Sect. B.) Similarly, ITO's recommenda-

the Charter is a weaker instrument than the American negotiators wished emphasizes the importance of national action. Without interfering with ITO—indeed, helping to achieve its goals—the United States may pursue nationally, in so far as this is practicable, the policies that it hopes will some day be followed internationally.

*Reforming the Antitrust Laws*

The antitrust laws are the principal American weapon for checking monopoly. In a subsequent report we shall deal with weaknesses of the antitrust laws and possible revisions of them, based on a study of domestic monopoly problems. To avoid anticipating the conclusions of that report, we refer here only to a few possible changes in the law that bear directly on international cartels, especially to the Webb-Pomerene Act.

Although the antitrust laws have been used increasingly in the past ten years against firms affiliated with international cartels, a number of points about their application to American firms doing business abroad remain unsettled. Suits now in progress cover many of the doubtful points, so that the meaning of the laws will soon be clarified by judicial interpretation. It is not our intention to anticipate these decisions. We wish only to make tentative suggestions as to what construction would give these laws maximum effectiveness as an instrument of American cartel policy. If the courts rule that the present laws have full force and effect in application to cartels, well and good; if not, then we believe Congress should make suitable revisions.

We are concerned with three major points and with two of less importance.

1. *Cartels dividing third-country markets.* American firms have sometimes participated in international cartels dividing the markets of third countries (*i.e.,* of countries not represented in the cartel). If such agreements can be shown to restrain American imports or exports, they are clearly illegal. But it is not always clear when restraint exists. In a pending case, the Department of Justice alleges that joint ownership by du Pont and Imperial Chemical Industries of

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tions for action against a particular cartel presumably could not call for measures prohibited by other parts of the Charter, unless the proper procedures were followed for relieving a country of these obligations. This subject may be worth examining further.

the "Duperial" companies in Argentina and Brazil is part of an illegal combination under the antitrust laws. (C in A, X.) Such an arrangement, standing alone, appears to have no direct effect on American imports and only a slight collateral effect on the exports of other American firms.

But even if direct restraints cannot be shown, we believe that the spread of cartelization, by holding down world trade and sustaining uneconomic production, is bound to damage American foreign trade. An American firm participating in such a cartel may get a higher price for a given quantity of exports to the controlled market than it would without the cartel. It may also make more profits and obtain a larger percentage of the trade than it would otherwise. But its volume of exports to the market thus divided is likely to be less than it would be under unrestricted competition. Or the loss may be in American export trade with the country of the cartel partner. We see no reason to permit American firms to participate in cartels dividing third-country markets.[13] The United States, and the world, will be better off if, instead of joining them, American firms compete with the cartels.

2. *Doing business in cartelized markets.* A somewhat different problem arises when American firms participate with foreign companies in cartel arrangements covering the countries in which the foreign companies are located. (C or C, 255-58.) The defense offered by American businessmen is that unless they enter such agreements they cannot operate in the market in question, so there would be a loss in American exports. Sometimes the barrier is legal—the government will not permit firms to trade unless they join the cartel. Sometimes the barrier is practical—the cartel has the market tightly under control and by a variety of means can make it impossible for newcomers to enter. These arguments have merit and it is not easy to

13. It is sometimes argued that the alternative to fify-fifty division of a third-country market between an American company and a foreign firm under whose patents it operates is the complete exclusion of the American firm from the third market and monopolization of that market by the foreign patent-holder. Such a case would certainly be exceptional. If patents provide the basis for division of the market, as in the instance cited in the text, ordinarily each partner will share in the patent rights of the other. Like most business agreements, cartel agreements involve reciprocity. If the foreign firm held all the valuable patents, it might give the American firm rights under its United States patents in exchange for royalties. But in these circumstances seldom would an American firm seek or a foreign firm grant licenses under the foreign firm's patents in a third country and arrange to share that market on a fify-fifty, or any other, basis.

devise a policy for such situations that conforms to the objective of curbing cartels. The danger, indeed the likelihood, is that a deal covering the home market of a foreign cartel partner will ramify to world markets—including the American market.

We believe that ITO may be a useful medium for attacking cartel arrangements, with or without governmental support, that make adherence to a market-sharing agreement a condition of the privilege of doing business in any given market. One difficulty is, however, that in so far as such arrangements rest on national legislation they may be held not amenable to ITO corrective action. For the general trade provisions of the Draft Charter (DC, Chap. IV) are primarily concerned with discrimination based formally on the national origin of imports—a form of discrimination that cartel-supporting measures can readily avoid. Nevertheless, we recommend that the United States take prompt and vigorous action through ITO to test the applicability of the Charter provisions against trade discrimination (DC, Art. 20, Par. 1, and Art. 22, Par. 1) and against restrictive business practices (DC, Art. 44, Par. 1, and Art. 47, Par. 1) to discrimination in or by any country against firms that do not join a cartel.

3. *Foreign subsidiaries.* A third problem of the application of the antitrust laws, which bears on both the former questions, is their applicability to foreign subsidiaries of American firms or foreign corporations controlled by Americans. This is a complex problem, involving a conflict in jurisdiction between American law and the laws of the countries in which these companies operate. It would be very difficult to apply American antitrust laws in a thoroughgoing fashion to these foreign corporations. The question of proof, difficult enough at home, is made even harder. On the other hand, if the United States does nothing, evasion of the antitrust laws in their application to American foreign commerce becomes fairly easy. The best solution would be effective curbing of cartels by ITO.

4. *Additional remedies.* Another proposal worthy of consideration is amendment of the antitrust laws to permit the government, pending judgment in an antitrust suit, to impound the funds of foreign firms that are defendants in such suits, or to file an injunction against their withdrawal of that part of their assets normally held in this country. The purpose would be to put foreign firms on a more nearly

equal basis with American companies, which usually have their principal assets and place of business here. Should such a change be made, it would be important to devise safeguards that would lessen two serious risks: discrimination against foreign firms that might lead to foreign retaliation against American firms; and misuse of the new power that might have the indirect effect of erecting an administrative trade barrier against imports.

5. *Compulsory registration* by American firms of their important foreign agreements might help remove some of the obstacles to discovery and proof of violations of the antitrust laws. How much it would help depends primarily on the degree of disclosure that could be enforced.

*Webb-Pomerene Act*

In 1918, Congress passed the Webb-Pomerene Act to permit American firms to form export associations so as to increase their power to compete in foreign markets against foreign monopolies. (C or C, 258-61.) In particular, the sponsors of the law expected that cooperation would enable small firms to export more economically by sharing selling costs. Associations registered under the Act are exempt from the antitrust laws provided they do not restrict imports into the United States, restrain exports of nonmember American firms, restrain trade inside the United States, or "artificially or intentionally" affect prices in the United States. Though the Federal Trade Commission has registered, all told, about 125 Webb-Pomerene associations, only about 50 are now active. The courts have not had much occasion to interpret the Act, so that its exact meaning is obscure.

Some business groups want not only a clearer but a greater exemption from the antitrust laws than the Act provides. A memorandum prepared for the National Foreign Trade Council in 1944 recommended that the State Department be authorized to approve agreements by Webb-Pomerene associations with foreign business firms in the same industry that impose only a "reasonable" restraint on American trade, providing it judges such agreements to be warranted by laws and conditions abroad or by our foreign economic policy. (C or C, 257-58.) We do not believe that a case has been made for relaxing the law in this way. It has not been shown that the suggested

change in antitrust laws would benefit the United States, though it would clearly benefit some American firms at some times. We adhere to the view that cartelization anywhere tends to damage American interests. Tighter, not looser, laws are needed.

On the other hand, some official interpretations would narrow the release from the antitrust laws that the Webb-Pomerene Act has been understood to give. In 1940 the Federal Trade Commission forbade members of Pacific Forest Industries, a Webb-Pomerene association dealing in plywood, to refuse to make sales for export to American firms not belonging to the association. (C or C, 259.) One of the points in the Department of Justice's complaint filed in 1944 against the United States Alkali Export Association is that its members not only jointly fixed export quotas and prices, but fixed them in concert with foreign alkali producers and even with domestic nonmember producers. (C in A, 430-38.) It would appear from these charges that members of the alkali association, at least, had the mistaken impression that the statutory grant of the privilege of association *among American exporters* for promoting their mutual interests in expanding sales abroad carried with it the privilege of agreement with foreign competitors on the terms on which such sales might be made. Nothing in the Act suggests that Congress intended to confer such a broad exemption from the laws prohibiting restraints of trade in American foreign commerce. But to allay any doubts we recommend that Congress specifically prohibit price-fixing and other agreements in restraint of trade between Webb-Pomerene associations and foreign producers.

Such a step would still leave unresolved the basic issue: Why not repeal the Webb-Pomerene Act entirely? On its face this sanctioning of monopolistic practices in foreign trade is wholly out of harmony with the ends of American cartel policy. Probably most economists would agree that the Act has not served the primary purpose for which it was passed. That purpose was not to strengthen the bargaining position of American producers in making cartel arrangements with foreign monopolies. It was to strengthen the *competitive* position of American producers in markets that foreign monopolies dominated.

Much of United States export trade is conducted by giant corporations that need no export associations to equalize their competitive

power with that of foreign firms, or even organized groups of foreign firms. Nor are American big business concerns under any handicap in dealing with foreign buyers, organized or unorganized. In any event, promoting exports is not a major problem for the American economy these days.

Moreover, at home the antitrust laws seek to end competitive disparities by breaking down the concentration on one side, not by building it up on the other.[14] If the government reverses this strategy in foreign trade, manifestly it will strengthen the forces making for cartelization. A situation in which a single buyer opposes a single seller does not promote competition. It tends to draw in governments to help both sides and to transform ordinary trading processes into diplomatic contests involving national prestige and affording wide opportunities for jingoism. Unorganized importers abroad may feel that they have to combine to deal on a basis of equality with Webb-Pomerene associations, so that the law becomes a transmission belt for cartelizing tendencies. If the United States is to be successful in persuading other countries to uproot cartel practices, it must not only set an example but, as a severely practical matter, it must assure them that if they suppress monopolies at home and forego state trading they will not then be exposed to the disadvantages of buying from a monopolistic combination of American exporters.

One of the greatest risks the United States incurs from the Webb-Pomerene law is the spread of monopolistic practices from export trade to the domestic economy. Practices that are lawful under this Act when used in export business are illegal in domestic business. We agree that "producers who have learned to cooperate in regulating their foreign sales, and have found means of making their joint program effective, are not likely to forget what they have learned, when doing business in the home market." (C or C, 259.)

The case against repealing the Webb-Pomerene Act is similar to the case for passing it originally. No one thinks that ITO will eliminate cartels overnight. It may—contrary to our hopes—make only very slow progress, or it may prove ineffective. Even on the most optimistic assumption, American exporters will face foreign cartels in many markets for a long time to come. A new element strengthens

14. Except that the government has pursued the opposite strategy in fostering farm cooperatives and, until recently, labor organizations.

the argument against repeal. Negligible before the war, state trading is now a potent influence in international commerce. While some state trading organizations will disappear as more stable conditions return, many are likely to continue indefinitely. The system may even spread to additional lines, particularly if nationalization of industries continues. The ITO is not intended to bar state trading. Although the Charter sets out rules (DC, Chap. IV, Sect. D) intended to assure equal treatment for all countries by state trading enterprises, it is an open question whether these Charter provisions can be effectively applied. So in many lines American exporters are likely to face a greatly reduced number of potential purchasers, with the result that when a large number of American firms are competing with one another for the trade they will be at a considerable bargaining disadvantage. Such a situation may not always be seriously detrimental to the American economy, but the presumption is that at some times the formation of export associations would be warranted.

Added to these bargaining arguments for export associations is one based on economy. Often relatively small American firms do not sell in foreign markets, simply because the cost to each of maintaining a separate export organization is too great compared to the volume of its prospective foreign sales. By getting together, a number of these firms can divide the costs, reduce overhead, and so profitably engage in exporting. The result is to increase competition in foreign markets and improve the condition of small business at home, both desirable results from the point of view of general American economic policy. Although one of the original purposes of the Webb-Pomerene Act was to promote export associations of this sort, the results seem to have been rather meager. Many, probably most, of the registered associations have represented a few large exporters. It may be that the smaller business firms prefer to use regular export houses, some of which specialize in certain kinds of products. Or they may not trust a joint sales agency to hold an even balance among a number of rival brands. Still, there seems to be a legitimate role for cooperative export associations.

### *A Proposed Reform*

After weighing these arguments, the Committee recommends repeal of the Webb-Pomerene Act and its replacement by new legisla-

tion. The substitute statute should, in our view, permit the formation of export associations only under defined circumstances and subject them to clearer and stricter rules than those of the present Act. We suggest that the statute limit permissible association in export trade to groups of small-scale enterprises organized for collective action in accordance with strictly defined cooperative principles. A "small" firm might be defined as one producing (or selling) less than a specified percentage, say 10 per cent, of the total domestic output of a given industry, or class of products.[15] Moreover, the statute should limit the size of such associations to groups of firms accounting altogether for not more than, say, 25 per cent of total exports (or domestic production) of the product in question.[16]

On investigation it may well be found that export associations membership in which is limited to small firms organized for cooperative marketing abroad will not need so broad an exemption from the antitrust laws as Webb-Pomerene associations have at present. Their principal purpose would be served by the maintenance of joint sales, advertising, and service agencies. The limitation on the size of such associations and of those eligible for membership in them would make them comparatively impotent to suppress competition on the world market, as long as they operated independently.

Such a law would reduce the dangers inherent in blanket authorization of export associations. Yet it would encourage experiments in the development of more economical methods of handling sales in foreign markets. High selling costs undoubtedly hold back many small-scale enterprises from the attempt independently to build up an export business. The proposed measure should help to lower this hurdle. Thereby it should not only add to the number and improve the position of American industries engaged in foreign trade but also strengthen competitive forces in both domestic and foreign markets.

15. The definition of "industry" or "class of products" could be left for administrative determination, for example, by the Federal Trade Commission.

16. "The Webb-Pomerene Act should not, I believe, be changed to afford immunity from the Sherman Act only to corporations of relatively small size and economic power. During these days of extreme nationalism on the part of practically every country with whom you do business, it seems to me that large corporations need the Webb-Pomerene Act almost as much as small ones do. When conditions become more nearly normal in the world, then I believe the Webb-Pomerene Act can be changed to apply only to corporations of smaller size." D. M. NELSON.

### *Import Associations*

The Webb-Pomerene Act concerns only export associations. Past attempts to amend it to include import associations have failed. The question arises again in any reconsideration of the policy behind the Act and will be heard more frequently in so far as state trading spreads. The case for permitting import associations rests mainly on two arguments. One is a bargaining argument: to get the best terms from a monopolistic foreign seller. But even if importers are not buying *from* cartels or state trading monopolies, they may be competing *with* such purchasers for foreign supplies. Inability to contract for as large supplies over as long a period as can the monopolies may mean that American buyers will get imports on disadvantageous terms or even, in the case of scarce materials, fail to get adequate supplies. The arguments against permitting import associations are similar to those applying to export associations.

We know of no evidence of real need for import associations, pending a trial of the ITO experiment in regulating the organization and operation of intergovernmental commodity agreements, discussed hereinafter (see Part V). Should a serious problem develop later, warranting government action, the Committee believes that the most likely solution would lie in legislation similar to that we have recommended for export associations.

### *Patent Reform*

Regardless of what is done internationally, the United States needs to reform its patent laws. Much can be done in this way to check the participation of American firms in international cartels. As the primary problems concern domestic monopoly, however, we shall defer our recommendations on this subject to our next report.

### *The Defeated Enemy*

Germany was "the birthplace of the modern cartel." (C or C, 23.) German industrial leaders exercised a major, even a dominating, influence in many international cartels. Japan, with its Zaibatsu—family holding companies controlling great segments of the economy—was a unique example of clannish feudal forms enclosing the substance of modern industry. Now both countries have lost their au-

tonomy. The victors are free to pick apart the domestic industrial organization of these lands, and chop off their foreign projections. In both places, the United States has pursued a policy of crushing monopoly and cutting the cartel ties of industry.

The Allied Control Council in Berlin, early in its life, adopted a law intended to break up German cartels. American officials have in addition decreed that no firm in the American zone may employ over 10,000 persons, unless the military government exempts it from the rule. The German and foreign patents of German firms seized by American occupation authorities in Germany, and the American patents of German-owned companies taken over by the Alien Property Custodian in the United States, are being offered on nonexclusive licenses (except that any exclusive rights of American firms have been protected). Other countries have promised, in an international agreement, to do likewise. During the war the United States used the pressure of its black list to persuade Latin-American governments to sell German-owned companies in their countries to non-Germans, preferably local nationals. In "safehaven" agreements covering German assets in Sweden and Switzerland, and in following the same policy elsewhere, the United States has also sought to break German cartel connections. Allied agreements on the general principles to govern reparations contemplate divestment of German ownership of firms operating in Allied countries, Austria, and eastern European ex-satellites of the Axis group. The policy of the Alien Property Custodian in selling the German-owned firms seized in the United States has been to keep them out of the hands of the cartel partners of German industry.

Japan, too, has been introduced to antimonopoly decrees aimed at breaking up the Zaibatsu. Some dissolution has been carried out and restrictions put on ownership, job-holding by former Zaibatsu managers, interlocking directorates, size of firms, etc. There have been difficulties, partly because the feudal forms in Japan were not just façades but part of the substance of the country. Lack of capital, of business experience, and of knowledge of the ways of markets has seriously hampered the search for buyers of the separated parts of the old monopolies. It takes more than laws and business reorganizations to turn a highly monopolistic economy into a competitive one.

We set out these facts because they are a part of American cartel

policy. We have not attempted to appraise in detail the measures taken in the occupied countries, or to make recommendations about them. Their general direction is clearly desirable. They undoubtedly have faults—for example, limiting each firm's share of the national output of a product would be more effectual as a check on monopoly than a limit on the number of employees. The policies may not be altogether adequate for their purpose—for example, on the basis of experience after World War I it is open to doubt that the measures thus far used to keep the former German-owned firms in the United States out of cartel hands will accomplish their purpose.

It is important that the United States continue to take steps to dismember German and Japanese cartels. But we have no illusions that this is the key to the world cartel problem.

American cartel policy must have two parts: action taken through the ITO, and action taken by the United States alone, or in combination with a few other countries. These policies need not conflict; they should complement one another. In fact, either alone would be far less effective than the two together. Cartel issues are complex; American cartel policy, while vigorous, must also be cautious. The government must know what it is hitting at, and why. The recommendations we have made in the foregoing pages are intended to help in giving clarity and effectiveness to American policy.

## V. INTERGOVERNMENTAL COMMODITY AGREEMENTS

Before the war, Americans who talked about "cartels" often had in mind the rubber and tin restriction schemes. This was natural enough because, as the world's greatest consumers of these products, Americans were directly affected by the attempts of the producing countries to limit production and exports so as to keep up prices. (C in A, III; C or C, V.) The producers were clearly engaged in cartel practices. Rubber and tin were not the only cases. World production and trade in coffee, tea, sugar, beef, sisal, timber, and a number of other raw materials were subject, in varying degrees, to similar arrangements. (C or C, IX.) Attempts were frequently made to do the same for wheat and cotton, among other products. Generally speaking, governments played a more important direct part in raw material control schemes than in cartels concerned with manufactured or semifinished goods.

Some of the prewar commodity agreements survived the war, or have been revived, though few industries have any occasion to curtail production in the present sellers' market. Governments have held discussions looking toward possible new agreements regarding cotton and wheat. A large part of the world's trade in wool and cocoa is now subject to government-sponsored control arrangements. Conservation agreements—a rather different matter, but bearing closely on the regulation of production and marketing—have been signed regarding whaling, and discussed for other marine resources. (C or C, IX.) Oil is the subject of a whole series of international understandings, including a proposed treaty between the United States and Britain.

Most of the raw material control agreements of the 1920's and 1930's were born of depression, low prices, and unsalable surpluses. The same fears of overproduction and the threat of depression that stimulated the formation of private cartels, urged governments to institute commodity agreements. In addition, most governments now regulate agriculture according to special regimes of one sort or another that limit the free play of market forces and find their natural counterpart in some kind of "ordered" world market.

Some people have argued that if it is the policy of the United States to remove barriers to world trade, and particularly to oppose private cartels, then consistency requires opposition, also, to intergovernmental commodity agreements. According to this line of reasoning, restrictive practices have much the same effects whether carried out by governments or by private business. We have some sympathy for this point of view, and are mindful of the warning it contains—that a restriction on trade or production is a restriction, whoever imposes it. But we believe that the production and marketing of many primary commodities have characteristics that under some circumstances justify governments in making commodity agreements temporarily restricting production and trade.

Reliance on market forces as a major determinant of world trade and production presumes that when a product's price drops it will lead to a fairly prompt response both by way of an increase in sales and by way of a reduction in output, as producers go into other lines of business. In practice, various factors hinder and retard this process of adjustment. For many primary commodities the adjustment of

output to changes in price or in costs of production is extremely sluggish. A fall in the price of a farm product does not ordinarily lead to lower production, at least not for a long time. Soil, climate, his own abilities, and a host of other factors may prevent a farmer from switching to other crops. A lower price may even lead to increased production if each producer decides that the surest way to keep up his income is to plant a bigger crop.

A different situation exists in the case of many minerals. A fall in prices may produce no greater sales because demand is determined primarily by the level of activity in one or more manufacturing industries that use the mineral product as a raw material. To avoid piling up surplus stocks, mines are shut down and the miners thrown out of work. Mining communities are generally isolated. The unemployed have far fewer chances for alternative jobs than would most manufacturing workers. (C or C, 311-12.) A closed mine means an empty cupboard; migration to where the jobs are is difficult. When the economy of a large region or a whole country depends heavily on mining, a shutdown is a national calamity.

The governments of countries largely dependent on some mineral or agricultural industry cannot afford to stand by and let the industry fail, even temporarily. The industry's crisis is a national crisis. The government will be bound to do what it can to offer protection. The means quickest to hand is the restriction of production and trade. If there are other important sources of the same product, concerted action with the governments of these countries will offer a better chance of success.

Put briefly, competitive market forces will not do their job in the case of a number of raw materials, except over a long period and at very great human and social cost. To avoid that cost and to reduce the risks of unstable production and trade in raw materials, intergovernmental commodity agreements with proper safeguards are justified in the interests of the world economy. Their justification is in easing temporary difficulties, not in sheltering an industry against long-run changes.

This is not a blanket endorsement of commodity agreements. Most of those used in the past have probably done more harm than good. (C or C, 320.) The strongest pressure for commodity agreements comes from producers (and their governments) who want the kind

of protection businessmen seek in private cartels. The dangers of sanctioning any such agreement are substantial. It is easy to slip from a prudent restriction to a predatory holdup. "Temporary" measures gradually become permanent. "A fundamental defect of so-called defensive cartels is that they have tried to stabilize economic situations by grappling with the effects of disequilibrium rather than with its causes." (C or C, 171.) To conform to the general principles of the trade policy it has sponsored, the United States must try to limit commodity agreements to situations in which exigent circumstances leave no alternative and to subject all agreements to certain standards that will guard against their principal dangers.

These are the main standards for a desirable commodity agreement: (1) Restrictions should apply only where the inability of competitive market forces to make a prompt adjustment is clear. A commodity agreement should not, in the guise of meeting such a situation, become a vehicle for imposing such restrictions as producers alone would impose, acting in their own special interest. (2) An agreement ought to be limited to the duration of the conditions it is designed to remedy. Chronic maladjustment in an industry should be a signal for the application of corrective measures —including, for example, educational programs directed to both consumers and producers—not an excuse for a permanent restrictive agreement. (3) Every agreement should be used to facilitate and promote fundamental adjustments that will reduce the future need for agreements, not to postpone or prevent such adjustments. (4) The adjustments should be in the direction of the most efficient allocation of world resources. Our assessment of the ITO Charter provisions regarding commodity agreements proceeds on the basis of these standards.

### *ITO and Commodity Agreements*

Recognizing that international trade in some primary commodities "may be affected by special difficulties" of the sort we have discussed, the ITO Charter stipulates the conditions in which intergovernmental commodity agreements may be used and prescribes standards to which they must conform. (DC, Chap. VI.) Governments may use commodity agreements for six specified purposes: (1) "to prevent or alleviate the serious economic difficulties which

may arise" when competitive market forces will not work fast enough; (2) to provide "a framework" for measures of adjustment; (3) "to moderate pronounced fluctuations" in raw material prices; (4) to conserve and develop natural resources; (5) to expand raw material production "where this can be accomplished with advantage to consumers and producers"; and (6) to assure the equitable distribution of scarce commodities. (DC, Art. 54.) Recognition of these as legitimate purposes of intergovernmental commodity agreements need not imply that other purposes are necessarily illegitimate, but it seems to establish a presumption to that effect. To discover the real meaning of the Charter provisions on commodity agreements requires examination of the more detailed stipulations.

Some of the Charter's rules apply to all intergovernmental commodity agreements.[17] Thus, all members of ITO are permitted, and countries not members of ITO may be invited, to participate, on terms of equality, in any agreement; the trade of nonparticipating members must be given equitable treatment; and full publicity must attend the formation and execution of all agreements. These are desirable principles.

More important for our present purposes are the more stringent rules that apply to "commodity control agreements"—those restricting production or trade, or regulating prices. (DC, Art. 58, Par. 2.) Commodity control agreements are to be subjected to special rules, in addition to those governing all commodity agreements. Three points are crucial: How tight is the definition of a commodity control agreement? When may such an agreement be used? Do the rules applicable to such agreements provide the kind of safeguards we have suggested above?

The *definition* is reasonably clear, even though it includes as criteria of "control" the purpose or possible effect of the agreement. An agreement that does not regulate prices is not a commodity control agreement unless it *both* regulates production or trade *and* has a restrictive purpose or effect. The decision rests with ITO as to

17. Bilateral agreements falling under the state trading rules of the Charter (DC, Chap. IV, Sect. D) and other agreements involving only one exporting and one importing country are excepted from the provisions governing intergovernmental commodity agreements (DC, Art. 67). However, acting on the complaint of a member country, ITO may rule that an agreement of the latter type is subject to some or all of the provisions of the commodity agreement chapter because it "seriously prejudices" the interests of the complaining member. (*Ibid.*)

whether a given commodity agreement falls under the definition of a control agreement. (DC, Art. 58, Par. 3.)

As in the cartel chapter of the ITO Charter, the full meaning of the provisions of the commodity agreements chapter depends on the future policy of governments. The Charter contemplates that an agreement regulating production or controlling trade may be held, nevertheless, not to be a commodity control agreement. In such a case, however, ITO may subject the agreement to *some* of the more stringent rules applicable to commodity control agreements if it wishes. (DC, Art. 58, Par. 4.) Other qualifications to the definition include an interpretative footnote stating that "Inter-governmental commodity agreements approved by the Food and Agriculture Organization for the distribution of basic foods at special prices are permitted under this draft Charter . . ." (DC, Art. 54.) On its face, this language seems to exempt such FAO-approved agreements, regardless of their particular terms, from all the ITO rules governing intergovernmental agreements covering other commodities than "basic foods."

*Commodity control agreements may be used* only when one of two conditions exists. The gist of the Charter provision which defines these conditions is that a "burdensome surplus" of a farm product or "widespread unemployment" in a mineral industry must actually exist or be "expected to develop." (DC, Art. 59, Par. 1.) These last words, looking to a future of unspecified remoteness, could prove to be a loophole—it is not hard to hypothesize an eventual crisis for almost any raw material. Still, a provision of this general character is justified; it would be folly to wait for surpluses to get large and the unemployed numerous before acting.

The formula is in general right. Applying it may give trouble. The decision as to when conditions exist that justify a commodity control agreement is to be made, not by ITO, but "*through* the Organization *by consultation and agreement among Members substantially interested* in the commodity concerned." (DC, Art. 59, Par. 2; italics supplied.) Undoubtedly a good argument could be made to show that it is preferable to have the producing and consuming countries mainly involved in a particular commodity problem decide how to handle it, whether or not they happen to have seats on the ITO Executive Board. Even further beyond doubt is the fact that the

language of this paragraph is extremely vague. Does "agreement" mean the consent of all who are "substantially interested"; a veto power, in short? Many other questions arise.[18] Carefully drawn as the basic formulas are, no one would contend that it will be easy to say when they apply to a given commodity, particularly in advance of a crisis. Once again, the ITO agreement takes a step forward—but the next step is crucial.

The *rules* to which commodity control agreements are to conform deal with both organization and substance. The Charter provides in some detail for the administration of commodity agreements, calling for a commodity council representing all participating governments, the ITO, and (with ITO permission) other international organizations. (DC, Art. 61.) The most important organizational provision (DC, Art. 60) is that in substantive matters countries "largely interested in imports" shall, taken as a whole, have an equal number of votes with countries "largely interested in obtaining export markets." [19] Commodity control agreements sanctioned by ITO are not to be dominated by producers.

The substantive rules for commodity control agreements are stated in rather general terms. (DC, Arts. 57 and 60.) For example, agreements must "be designed to assure the availability of supplies adequate at all times for world demand at reasonable prices." (DC, Art. 60.) Also, countries participating in commodity control agreements are to undertake programs of internal adjustment "believed to be adequate to ensure as much progress as practicable within the duration of the agreement towards solution of the commodity problem involved." (*Ibid.*)

Finally, the Charter limits the duration of commodity control agreements to five years, subject to renewals for a like period, and requires ITO periodically to publish a review of the operation of

18. Members undertake not to enter into commodity control agreements until after a commodity conference sponsored by ITO recommends such action. If such a conference, or its predecessor study group, has "unreasonably delayed" its proceedings, however, the members "substantially interested" may go ahead by direct negotiation. (DC, Art. 58, Par. 6.)

19. Countries which are consumers of a product in their home territories and producers in colonies, or vice versa, may be represented on both sides of the table. Important producers and consumers that are not substantial traders in a commodity or other countries that do not precisely fit either main class are to have "an appropriate voice" within either group. For a review of experience with consumer representation and an analysis of its advantages and limitations, see C or C, 273-79.

each. (DC, Art. 62.) If ITO decides "that its operation has failed substantially to conform to the principles laid down," the participating countries are required to revise the agreement or withdraw from it. (*Ibid.*)

The Draft Charter makes special provision for existing commodity control agreements. (DC, Art. 65.) Member countries are obliged to inform ITO of the terms of all intergovernmental commodity agreements in which they participate. If ITO decides that an existing agreement is inconsistent with the Charter, "Members shall conform with the decisions made by the Organization regarding their continued participation . . ." (*Ibid.,* Par. 1.) Similar provisions cover intergovernmental commodity agreements that are in the negotiating stage.

*Judging the ITO Chapter on Commodity Agreements*

The basic approach of the commodity agreements chapter seems promising. The chapter rules out agreements that restrict production, trade, or consumption, or that regulate prices, except in special circumstances, and they must then conform to certain rules. The safeguards have great merit. The prerequisite that economic conditions make an agreement necessary, the balance of consumer and producer voting, the provisions for limited duration, review, publicity, and cancellation of undesirable agreements, all mark a distinct advance over past practices in this field. No existing or prewar commodity agreement met all these requirements, although the 1937 sugar agreement came close to doing so. The provisions regarding maintenance of adequate supplies at reasonable prices, use of the agreements to make fundamental adjustments in production and the like, all point in the right direction, but they are loosely phrased. The administrative provisions and rules regarding equitable treatment of all countries are in line with suggestions in Chapter 9 of *Cartels or Competition?,* which we endorse.

Along with the endorsement of these features of the ITO Charter must go a warning about loopholes and unsettled conditions. Our summary of the commodity agreement chapter has indicated two important points: ITO is to decide whether an agreement is a "commodity control agreement" subject to special rules; the determination of when the "burdensome surplus" or "widespread unemploy-

ment" formulas apply is left to "the Members substantially interested." In short, the content of the chapter is to be poured into it by the member governments. Much that we have already said about the analogous point in the cartel chapter concerning decisions about forbidden practices applies here as well.

ITO is not an independent body; what it does about commodity agreements depends on its members. This kind of constitution is probably the best that can be attained in the present state of world opinion. Some agency must decide when certain crucial facts exist, and whether agreed rules apply to them. Governments seem unprepared to delegate that job to independent international courts or administrative bodies. Eventually this attitude may change. But for the near future at least, the most important ITO decisions will be taken by officials politically responsible to national governments.

The rule for deciding whether a given agreement is a "commodity control agreement" has several special weaknesses. The most fundamental, perhaps, lies in the definition itself, which implies that an agreement regulating production and restricting the quantity of exports and imports may be exempted from the rules governing commodity control agreements because it does not have the purpose or is not likely to have the effect of "reducing, or preventing an increase in, the production of, or trade in" the commodity in question. The reasoning seems to us dubious; the practice likely to be dangerous. We believe that any agreement regulating production, trade, or prices ought to conform to the Charter's rules for commodity control agreements.

The ambiguity of the footnote exempting from Charter rules FAO-approved agreements for selling food at special prices is an invitation to trouble. Such agreements ought to conform to the general rules applicable to one or the other of the two kinds of commodity agreements sanctioned in the Charter. If their subsidized sales provisions need an exemption, it should be specifically so limited, not extended to other terms of such agreements. Perhaps that is intended, but the present drafting does not rule out an alternative construction.

The exception of agreements for the distribution of scarce commodities also seems to us questionable. If it is meant to refer to temporary agreements used in the postwar period, a definite time limit would be wise. If the Charter's drafters thought that future agree-

ments of this sort ought to be freed of the rather complex body of rules applicable to commodity agreements generally, they should at least have set up some basic standards.

These are the Committee's main strictures on the commodity chapter of the proposed ITO Charter. They emphasize the risks that rules meant to limit the use of commodity agreements to cases of extreme urgency and to prevent their abuse will be evaded by groups—governmental or private—interested in re-establishing the kind of one-sided restrictive agreements that prevailed before the war. If the Havana conference plugs some of these holes, so much the better. If they are not plugged they are likely to hamper ITO in releasing world trade from private and public restrictions, bringing disillusionment to many of the Charter's supporters. Despite its faults, the ITO commodity chapter represents substantial progress in regulating intergovernmental commodity agreements. Its weaknesses emphasize the importance of a vigorous American policy on commodity agreements, pursued inside ITO.

*American Commodity Policy*

The issue over commodity agreements is not so clearly drawn between the United States and most of the rest of the world as is the cartel issue. The American Government is divided on the desirability of commodity agreements. The State Department, reflecting the trade-liberalizing principles of the Hull trade agreements program, has sought to limit the use of commodity agreements as much as possible and to hedge them with strong restrictions. In general, the Department of Agriculture takes a much more favorable view of such agreements. Several of its officials have supported a liberal commodity agreement program as a means of expanding world consumption of primary products. But probably their attitude has its roots in fear of surpluses like those of the 1930's, and reluctance to contemplate abandonment of a domestic agricultural program that tends to price American farm products out of world markets. This dual attitude of the United States Government is of major significance for future American trade policy. It emphasizes the importance of the ambiguities and exceptions in the commodity agreements chapter of the Draft Charter.

We have said that the chapter will be what the members of ITO

make it. Much depends on the United States. This country should strongly support ITO in its attempt to regulate commodity agreements, and should do everything possible to strengthen its machinery. The United States, as a great importer, exporter, producer, and consumer of primary products, will be eligible for inclusion in most commodity agreements. Its influence should be on the side of limiting restrictions to cases where they are practically indispensable, of insuring that consumer countries get their full rights of an equal voice, and—most important of all—of stressing the requirement that agreements be used as vehicles for making fundamental adjustments toward equilibrium in world production and consumption of the commodities subject to such agreements.

The United States should not try to use intergovernmental commodity agreements to protect its own producer interests regardless of their comparative costs. If this government goes into commodity control agreements as a representative of domestic producers, it should accompany such action with a program for speeding the readjustment of the agricultural and mining industries that are in distress. Strong forces in the United States will oppose a free world market in wool, wheat, sugar, rubber, copper, lead, perhaps cotton, and other products. The justification for shelter under an intergovernmental commodity control agreement is that it gives time to change fundamental conditions, to move toward satisfying world demand from the most efficient sources, and to allow inefficient producers to shift into other lines. Otherwise, a commodity agreement becomes not an umbrella for emergencies, but a concrete shelter for permanent residence. The aim of commodity agreements should be to end the need for commodity agreements.

## VI. CONCLUSION

We have outlined a cartel policy for the United States, making recommendations on some points, and have indicated the complexity of the issues. We do not underestimate the difficulties of carrying out this or any other policy to curb cartels. Knotty technical problems are involved for which sympathetic governments, no matter how resourceful they may be, may not find solutions. And some governments are unwilling to try. Though the program outlined seems to us to hit at the salient features of the cartel problem, doubt

inevitably remains whether, even if vigorously enforced, it would prove wholly successful.

The evidence accumulated in the staff studies shows how strong and pervasive is the drive toward combination, restriction, and control of the market. The institutional roots of cartelism are strong and deep. Nothing but experience can tell whether any policy can stunt or kill them. The need, moreover, goes beyond the curbing of cartels. Effort must be made to insure that what replaces them is better. It will not be enough to accept the substitution of monopolistic competition for cartels. This may even not be a lesser evil. We have advocated in this report the reinvigoration of competition, and governmental policies designed to foster it.

The world seems to be moving toward preoccupation with security, away from eager risk taking, even at the cost of greater risk for the community as a whole. This gives strength to the cartel movement and kindred control programs. Accompanying this change is an increasing reliance on governments to exercise the economic functions and to assume the risks formerly left to private citizens. The spread of nationalization, as we have pointed out, may substantially change the nature of the international cartel problem. It cannot alter the fact that restrictions on production and trade decrease the world's wealth, while the changed forms of control, and the changed motives of the controllers, in themselves bring additional problems.

Whatever the future holds, the present holds a problem of industrial control which must be faced. Even if the cartel-curbing policy we have here recommended is vigorously followed, it will take time to eliminate restrictive business practices. American policy must have continuity, or what is checked one year may have free rein the next. Yet continuity in governmental action is not easy under the American form of government. Democracy brooks no "party line." Something can be achieved by putting as much of the anticartel policy as possible into law, rather than leaving it to administrative discretion and judicial groping. But as the history of the antitrust laws shows, judicial decisions and political indecisions open up a crucial gap between the law on the books and the law in force. The only fundamental source of continuity is the continuous pressure of public opinion on the government to follow an anticartel policy. That requires unceasing activity by groups especially interested in the problem, and acute

public awareness of its implications for the common welfare. A vigilant public opinion requires a widespread understanding of how everyone's personal interest is affected by the activities of cartels, in a word, by restrictionism. We believe that the two volumes of this survey make a substantial contribution to such an understanding.

But even with widespread support in this country of its efforts to curb cartels, the United States faces great obstacles in seeking general acceptance of such a policy. To foreigners, advocacy of a sweeping anticartel policy by a country that is the home of big business sometimes seems hypocritical. As a nation, Americans tend to pitch declarations of national policy on a high moral plane and yet to acquiesce in numerous exceptions to general rules in response to the political strength of organized special-interest groups. This may be unavoidable in a democracy, though it ought to be resisted as much as possible. If a nation must depart from its professed principles, it should at least avoid making a virtue of necessary evil while refusing to grant the same privilege to other nations, which are also subject to the same kinds of pressure. In no field, perhaps, is this more important than in the field of cartels.

Throughout this report we have tried to emphasize the need to deal with the substance, not the form. What we recommend is a program of effective action against restrictive practices and concentrated control of the economy, whether by voluntarily organized private groups or by intergovernmental compacts, whether by scores of confederates operating in concert or by a few giant corporations operating in imperfect competition, and whether the victims are mainly of the present generation or the next, at home or abroad. More than ever before, the need is for a public economic policy based on principle. An effective policy must be consistent in all its parts, consistent in its appearance and in its reality, consistent in application to domestic trade and to trade among nations.

JAMES M. LANDIS, *Chairman*
A. S. GOSS
MARION HEDGES
DONALD M. NELSON
JACOB VINER
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# APPENDICES

# APPENDIX A

# DRAFT CHARTER FOR THE INTERNATIONAL TRADE ORGANIZATION OF THE UNITED NATIONS *

## CHAPTER V. RESTRICTIVE BUSINESS PRACTICES

*Article 44. General Policy towards Restrictive Business Practices*

1. Each Member shall take appropriate measures, individually or through the Organization or in both ways, to prevent business practices affecting international trade (whether engaged in by private or public commercial enterprises) which restrain competition, limit access to markets, or foster monopolistic control, whenever such practices have harmful effects on the expansion of production or trade and interfere with the achievement of any of the other objectives set forth in Article 1.

2. Without limiting the generality of paragraph 1 of this Article, and in order that the Organization may decide in a particular instance whether certain practices have or are about to have any of the effects described in paragraph 1 of this Article, the Members agree that complaints regarding any of the practices listed in paragraph 3 of this Article shall be subject to investigation in accordance with the procedure regarding complaints provided in Articles 45 and 47, whenever

(*a*) such a complaint is presented to the Organization; and

(*b*) the practices are engaged in or are made effective by one or more private or public commercial enterprises or by a combination, agreement or other arrangement between commercial enterprises, whether between private commercial enterprises, between public commercial enterprises, or between private and public commercial enterprises; and

(*c*) such commercial enterprises, individually or collectively, possess effective control of trade between two or more countries in one or more products.

3. The practices referred to in paragraph 2 of this Article are the following:

(*a*) fixing prices or terms, or conditions to be observed in dealing with third parties, in the purchase, sale or lease of any product;

* Embodied in the Report of the Second Session of the Preparatory Committee of the United Nations Conference on Trade and Employment at Geneva, Switzerland, April-August 1947.

(*b*) excluding enterprises from any territorial market or field of business activity, allocating or dividing any territorial market or field of business activity, allocating customers, or fixing sales quotas or purchase quotas;

(*c*) discriminating against particular enterprises;

(*d*) limiting production or fixing production quotas;

(*e*) preventing by agreement the development or application of technology or invention whether patented or unpatented;

(*f*) extending the use of rights under patents, trade marks or copyrights granted by any Member, to matters which are determined by its system of law not to be within the scope of such grants, or to products or conditions of production, use or sale which are similarly determined not to be the subjects of such grants;

(*g*) any similar practices which the Organization may from time to time decide are restrictive business practices.

4. In this Chapter the term "public commercial enterprises" means

(*a*) trading agencies of governments, and

(*b*) enterprises mainly or wholly owned by public authority and over which there is effective control by public authority, including control of engagement in a practice listed in paragraph 3 of this Article.

The term "private commercial enterprises" means all other commercial enterprises.

*Article 45. Procedure with respect to Investigations and Consultations*

1. The Organization shall arrange, if it considers such action to be justified on the basis of information submitted by the Members concerned, for particular Members to take part in a consultation requested by any affected Member which considers that in any particular instance a practice exists (whether engaged in by private or public commercial enterprises) which has or is about to have the effect described in paragraph 1 of Article 44.

2. A complaint may be presented in writing to the Organization by any affected Member on its own behalf or by any Member on behalf of any affected person, enterprise or organization within that Member's jurisdiction; *Provided* that in the case of a complaint against a single public commercial enterprise acting independently, such complaint may be presented only by a Member on its own behalf and only after the Member has resorted to the procedure under paragraph 1 of this Article.

3. The Organization shall prescribe the minimum information to be included in complaints that particular practices exist which have or are about to have the effect described in paragraph 1 of Article 44. The information shall give substantial indication of the nature and harmful effects of the practices.

4. The Organization shall consider each complaint presented in accordance

with paragraph 2 of this Article. If the Organization deems it appropriate it shall request Members concerned to furnish supplementary information, for example, information from commercial enterprises within their jurisdiction. After reviewing the relevant information the Organization shall decide whether an investigation is justified.

5. If the Organization decides that an investigation is justified, it shall notify all Members of the complaint, request any Member to furnish such additional information relevant to the complaint as the Organization may deem necessary, and shall conduct or arrange for hearings on the complaint. Any Member, and any person, enterprise or organization on whose behalf the complaint has been made, as well as the commercial enterprises alleged to have engaged in the practice complained of, shall be afforded reasonable opportunity to be heard.

6. The Organization shall review all information available and decide whether the practices in question have had, have or are about to have the effect described in paragraph 1 of Article 44.

7. The Organization shall notify all Members of its decision and the reasons therefor.

8. If the Organization decides that in any particular case the practices complained of have had, have or are about to have the effect described in paragraph 1 of Article 44, it shall request each Member concerned to take every possible remedial action, and may also recommend to the Members concerned remedial measures to be carried out in accordance with their respective laws and procedures.

9. The Organization may request any Member concerned to report fully on the remedial action it has taken in any particular case.

10. As soon as possible after its proceedings in respect of any complaint under this Article have been provisionally or finally closed, the Organization shall prepare and publish a report showing fully the decisions reached, the reasons therefor and any measures recommended to the Members concerned. The Organization shall not, if a Member so requests, disclose confidential information furnished by that Member which if disclosed would substantially damage the legitimate business interests of a commercial enterprise.

11. The Organization shall report to all Members and make public the remedial action which has been taken by the Members concerned in any particular case.

*Article 46. Studies relating to Restrictive Business Practices*

1. The Organization is authorized

(*a*) to conduct studies, either on its own initiative or at the request of any Member or of any organ of the United Nations or of any other inter-governmental organization relating to

(i) general aspects of restrictive business practices affecting international trade; and

(ii) conventions, laws and procedures concerning, for example,

incorporation, company registration, investments, securities, prices, markets, fair trade practices, trade marks, copyrights, patents and the exchange and development of technology, insofar as they are relevant to restrictive business practices affecting international trade; and

(iii) the registration of restrictive business agreements and other arrangements affecting international trade; and

(*b*) to request information from Members in connection with such studies.

2. The Organization is authorized

(*a*) to make recommendations to Members concerning such conventions, laws and procedures as are relevant to their obligations under this Chapter; and

(*b*) to arrange for conferences of Members to discuss any matters relating to restrictive business practices affecting international trade.

*Article 47. Obligations of Members*

1. Each Member shall take all possible measures by legislation or otherwise to ensure, within its jurisdiction, that private and public commercial enterprises do not engage in practices which have the effect described in paragraph 1 of Article 44, and in addition it shall assist the Organization in preventing these practices, such assistance to be given in accordance with the Member's system of law and economic organization.

2. Each Member shall make adequate arrangements for presenting complaints, conducting investigations, and preparing information and reports requested by the Organization.

3. Each Member shall furnish to the Organization, as promptly and as fully as possible, such information as is requested by the Organization for its consideration and investigation of complaints and for its conduct of studies under this Chapter; *Provided* that any Member on notification to the Organization, may withhold information which the Member considers is not essential to the Organization in conducting an adequate investigation and which, if disclosed, would substantially damage the legitimate business interests of a commercial enterprise. In notifying the Organization that it is withholding information pursuant to this clause, the Member shall indicate the general character of the information withheld, and the reasons why it considers it not essential.

4. Each Member shall take full account of each request, decision and recommendation of the Organization under Article 45 and, in accordance with its system of law and economic organization, take in the particular case the action it considers appropriate having regard to its obligations under this Chapter.

5. Each Member shall report fully any action taken, independently or in concert with other Members, to comply with requests and carry out recom-

mendations of the Organization, and, when no action has been taken, inform the Organization of the reasons therefor and discuss the matter further with the Organization if requested to do so.

6. Each Member shall, at the request of the Organization, take part in consultations and conferences provided for in this Chapter with a view to reaching mutually satisfactory conclusions.

*Article 48. Supplementary Enforcement Arrangements*

1. Members may co-operate with each other in prohibitive, preventive or other measures for the purpose of making more effective any remedial order issued by a duly authorized agency of any Member in furtherance of the objectives of this Chapter.

2. Members participating in or intending to participate in such co-operative action shall notify the Organization.

*Article 49. Domestic Measures against Restrictive Business Practices*

No act or omission to act on the part of the Organization shall preclude any Member from enforcing any national statute or decree directed towards preventing monopoly or restraint of trade.

*Article 50. Procedure with respect to Services*

1. The Members recognize that certain services, such as transportation, telecommunications, insurance and banking, are substantial elements of international trade, and that any restrictive business practices in relation to them may have harmful effects similar to those described in paragraph 1 of Article 44. Such practices shall be dealt with in accordance with the following paragraphs of this Article.

2. If any Member considers that there exist restrictive business practices in relation to a service referred to in paragraph 1 of this Article which have or are about to have such harmful effects, and that its interests are thereby seriously prejudiced, the Member may submit a written statement explaining the situation to the Member or Members the private or public enterprises of which are engaged in the services in question. The Member or Members concerned shall give sympathetic consideration to the statement and to such proposals as may be made with a view to affording adequate opportunities for consultation, with a view to effecting a satisfactory adjustment.

3. If no adjustment can be effected in accordance with the provisions of paragraph 2 of this Article, and if the matter is referred to the Organization, it shall be transferred to the appropriate inter-governmental organization if one exists, with such observations as the Organization may wish to make. If no such inter-governmental organization exists, Members may ask the Organization, under Article 69 (*c*), to make recommendations for, and promote international agreement on, measures designed to remedy the particular situation so far as it comes within the scope of this Charter.

4. The Organization shall, in accordance with paragraph 2 of Article 84,

co-operate with inter-governmental organizations in connection with restrictive business practices affecting any field coming within the scope of this Charter and those organizations shall be entitled to consult the Organization, to seek advice, and to ask that a study of a particular problem be made.

*Article 51. Exceptions to the Provisions of this Chapter*

1. The obligations in this Chapter shall not apply to:

(*a*) inter-governmental commodity agreements meeting the requirements of Chapter VI; and

(*b*) any bilateral inter-governmental agreement relating to the purchase or sale of a commodity falling under Section D of Chapter IV.

2. Notwithstanding paragraph 1 of this Article, the Organization may make recommendations to Members and to appropriate inter-governmental organizations concerning any features of the agreements referred to in paragraph 1 (*b*) of this Article which may have the effect described in paragraph 1 of Article 44.

## CHAPTER VI. INTER-GOVERNMENTAL COMMODITY AGREEMENTS

### SECTION A. INTRODUCTORY CONSIDERATIONS

*Article 52. Difficulties relating to Primary Commodities*

The Members recognize that the conditions under which some primary commodities are produced, exchanged and consumed are such that international trade in these commodities may be affected by special difficulties such as the tendency towards persistent disequilibrium between production and consumption, the accumulation of burdensome stocks and pronounced fluctuations in prices. These special difficulties may have serious adverse effects on the interests of producers and consumers, as well as widespread repercussions jeopardising the general policy of economic expansion. The Members recognize that such difficulties may, at times, necessitate special treatment of the international trade in such commodities through inter-governmental agreement.

*Article 53. Primary and Related Commodities*

1. For the purposes of this Chapter, the term "primary commodity" means any product of farm, forest or fishery or any mineral, in its natural form or which has undergone such processing as is customarily required to prepare it for marketing in substantial volume in international trade.

2. The term shall also cover a group of commodities, of which one is a primary commodity as defined in paragraph 1 of this Article and the others are commodities (whether primary or non-primary) which are so closely related, as regards conditions of production or utilisation, to the other commodities in the group, that it is appropriate to deal with them in a single agreement.

3. If, in exceptional circumstances, the Organization finds that the conditions set forth in Article 59 exist in the case of a commodity which does not fall precisely under paragraphs 1 or 2 of this Article, the Organization may decide that the provisions of this Chapter, together with any other requirements it may establish, shall apply to inter-governmental agreements regarding that commodity.

*Article 54. Objectives of Inter-governmental Commodity Agreements*

The Members recognize that inter-governmental commodity agreements may be employed to achieve the following objectives:

(*a*) to prevent or alleviate the serious economic difficulties which may arise when adjustments between production and consumption cannot be effected by normal market forces alone as rapidly as the circumstances require;

(*b*) to provide, during the period which may be necessary, a framework for the consideration and development of measures which have as their purpose economic adjustments designed to promote the expansion of consumption or a shift of resources and man-power out of over-expanded industries into new and productive occupations;

(*c*) to moderate pronounced fluctuations in the price of a primary commodity with a view to achieving a reasonable degree of stability on a basis of prices fair to consumers and remunerative to efficient producers, having regard to the desirability of securing long-term equilibrium between the forces of supply and demand;

(*d*) to maintain and develop the natural resources of the world and protect them from unnecessary exhaustion;

(*e*) to provide for the expansion of the production of a primary commodity where this can be accomplished with advantage to consumers and producers;

(*f*) to assure the equitable distribution of a primary commodity in short supply.

## SECTION B. INTER-GOVERNMENTAL COMMODITY AGREEMENTS IN GENERAL

*Article 55. Commodity Studies*

1. Any Member which is substantially interested in the production or consumption of, or trade in, a particular primary commodity, and which considers that international trade in that commodity is, or is likely to be, affected by special difficulties, shall be entitled to ask that a study of the commodity be made.

2. Unless it decides that a *prima facie* case has not been established, the Organization shall promptly invite each Member to appoint representatives to a study group to make a study of the commodity if the Member considers that it is substantially interested in the production or consumption of, or trade in, the commodity. Non-Members may also be invited.

3. The study group shall promptly investigate the production, consumption and trade situation in regard to the commodity, and shall report to the participating Governments and to the Organization its findings and its recommendations as to how best to deal with any special difficulties which may exist or may be expected to arise. The Organization shall promptly transmit to the Members these findings and recommendations.

*Article 56. Commodity Conferences*

1. On the basis of the recommendations of a study group, or at the request of Members whose interest represents a substantial part of world production or consumption of, or trade in, a particular primary commodity, the Organization shall promptly convene an inter-governmental conference to discuss measures designed to meet the special difficulties which exist or are expected to arise. The Organization may also, on its own initiative, call such a conference on the basis of information agreed to be adequate by the Members substantially interested in the production or consumption of, or trade in, the commodity concerned.

2. Each Member which considers that it is substantially interested in the production or consumption of, or trade in, the commodity concerned, shall be invited to participate in such a conference. Non-Members may also be invited to participate.

*Article 57. General Principles governing Inter-governmental Commodity Agreements*

1. The Members shall observe the following principles governing the conclusion and operation of all types of inter-governmental commodity agreements:

(*a*) such agreements shall be open to participation initially by any Member on terms no less favourable than those accorded to any other country and thereafter in accordance with such procedure and upon such terms as may be established in the agreement subject to approval by the Organization;

(*b*) non-Members may be invited by the Organization to participate in such agreements and the provisions of sub-paragraph (*a*) applying to Members shall apply to any non-Member so invited;

(*c*) under such agreements there shall be equitable treatment as between participating countries and non-participating Members, and the treatment accorded by participating countries to non-participating Members shall be no less favourable than that accorded to any non-participating non-Member, due consideration being given in each case to policies adopted by non-participants in relation to obligations assumed and advantages conferred under the agreement;

(*d*) such agreements shall include provision for adequate participation of countries substantially interested in the importation or consump-

tion of the commodity as well as those substantially interested in its exportation or production;

(*e*) full publicity shall be given to any inter-governmental commodity agreement proposed or concluded, to the statements of considerations and objectives advanced by the proposing Members, to the nature and development of measures adopted to correct the underlying situation which gave rise to the agreement and, periodically, to the operation of the agreement.

2. The Members, including Members not parties to a particular commodity agreement, shall give favourable consideration to any recommendation made under such agreement for expanding consumption of the commodity in question.

*Article 58. Types of Agreements*

1. For the purposes of this Chapter, there shall be recognized two classes of inter-governmental commodity agreements:

(*a*) commodity control agreements as defined in this Article; and
(*b*) other inter-governmental commodity agreements.

2. Subject to the provisions of paragraph 5 of this Article, a commodity control agreement is an inter-governmental agreement which involves:

(*a*) the regulation of production or the quantitative control of exports or imports of a primary commodity and which has the purpose or might have the effect of reducing, or preventing an increase in, the production of, or trade in, that commodity; or
(*b*) the regulation of prices.

3. The Organization shall, on the request of a Member, a study group or a commodity conference, decide whether an existing or proposed inter-governmental agreement is a commodity control agreement within the meaning of paragraph 2 of this Article.

4. (*a*) Commodity control agreements shall be subject to all the provisions of this Chapter.

(*b*) Other inter-governmental commodity agreements shall be subject to the provisions of this Chapter other than those of Section C. If, however, the Organization decides that an agreement which involves the regulation of production or the quantitative control of exports or imports is not a commodity control agreement within the meaning of paragraph 2 of this Article, it shall prescribe the provisions of Section C, if any, to which that agreement shall conform.

5. The Organization may decide that an existing or proposed inter-governmental agreement which has the purpose of securing the co-ordinated expansion of aggregate world production and consumption of a primary commodity is not a commodity control agreement even though the agreement contains provision for the future application of minimum prices. However, any such agreement shall be deemed to be a commodity control agreement and

shall conform to all the provisions of Section C from the date on which its minimum price provisions become operative.

6. The Members undertake not to enter into any new commodity control agreement, unless it has been recommended by a conference called in accordance with Article 56. If, in an exceptional case, there has been unreasonable delay in the proceedings of the study group or of the commodity conference, Members substantially interested in the production or consumption of, or trade in, a particular primary commodity, may proceed by direct negotiation to the conclusion of an agreement, provided that it conforms to the other provisions of this Chapter.

## SECTION C. INTER-GOVERNMENTAL COMMODITY CONTROL AGREEMENTS

### *Article 59. Circumstances governing the Use of Commodity Control Agreements*

1. The Members agree that commodity control agreements may be employed only when it is determined that:

(*a*) a burdensome surplus of a primary commodity has developed or is expected to develop, which, in the absence of specific governmental action, would cause serious hardship to producers among whom are small producers who account for a substantial portion of the total output, and that these conditions could not be corrected by normal market forces in time to prevent such hardship, because, characteristically in the case of the primary commodity concerned, a substantial reduction in price does not readily lead to a significant increase in consumption or to a significant decrease in production; or

(*b*) widespread unemployment or underemployment in connection with a primary commodity, arising out of difficulties of the kind referred to in Article 52, has developed or is expected to develop, which, in the absence of specific governmental action, would not be corrected by normal market forces in time to prevent widespread and undue hardship to workers because, characteristically in the case of the industry concerned, a substantial reduction in price does not readily lead to a significant increase in consumption but to a reduction of employment, and because areas in which the commodity is produced in substantial quantity do not afford alternative employment opportunities for the workers involved.

2. Determinations under this Article shall be made through the Organization by consultation and agreement among Members substantially interested in the commodity concerned.

### *Article 60. Additional Principles governing Commodity Control Agreements*

The Members shall observe the following principles governing the conclusion and operation of commodity control agreements in addition to those stated in Article 57:

(*a*) such agreements shall be designed to assure the availability of supplies adequate at all times for world demand at reasonable prices, and, when practicable, shall provide for measures designed to expand world consumption of the commodity;

(*b*) under such agreements, participating countries which are largely interested in imports of the commodity concerned shall, in decisions on substantive matters, have together a number of votes equal to that of those largely interested in obtaining export markets for the commodity. Any participating country, which is largely interested in the commodity but which does not fall precisely under either of the above classes, shall have an appropriate voice within such classes;

(*c*) such agreements shall make appropriate provision to afford increasing opportunities for satisfying national consumption and world market requirements from sources from which such requirements can be supplied in the most effective and economic manner, due regard being had to the need for preventing serious economic and social dislocation and to the position of producing areas suffering from abnormal disabilities;

(*d*) participating countries shall formulate and adopt programmes of internal economic adjustment believed to be adequate to ensure as much progress as practicable within the duration of the agreement towards solution of the commodity problem involved.

*Article 61. Administration of Commodity Control Agreements*

1. Each commodity control agreement shall provide for the establishment of a governing body, herein referred to as a Commodity Council, which shall operate in conformity with the provisions of this Article.

2. Each participating country shall be entitled to have one representative on the Commodity Council. The voting power of the representatives shall be determined in such a way as to conform with the provisions of Article 60 (*b*).

3. The Organization shall be entitled to appoint a non-voting representative to each Commodity Council and may invite any competent inter-governmental organization to nominate a non-voting representative for appointment to a Commodity Council.

4. Each Commodity Council shall appoint a non-voting chairman who, if the Council so requests, may be nominated by the Organization.

5. The Secretariat of each Commodity Council shall be appointed by the Council after consultation with the Organization.

6. Each Commodity Council shall adopt appropriate rules of procedure and regulations regarding its activities. The Organization may at any time require their amendment if it finds that they are inconsistent with the provisions of this Chapter.

7. Each Commodity Council shall make periodic reports to the Organization on the operation of the agreement which it administers. In addition it

shall make such special reports as the Organization may require or as the Council itself considers to be of value to the Organization.

8. The expenses of a Commodity Council shall be borne by the participating countries.

9. When an agreement is terminated, the Organization shall take charge of the archives and statistical material of the Commodity Council.

*Article 62. Initial Term, Review and Renewal of Commodity Control Agreements*

1. Commodity control agreements shall be concluded for a period of not more than five years. Any renewal of a commodity control agreement, including agreements referred to in paragraph 1 of Article 65, shall be for a period not exceeding five years. The provisions of such renewed agreements shall conform to the provisions of this Chapter.

2. Periodically, at intervals not greater than three years, the Organization shall prepare and publish a review of the operation of each agreement in the light of the principles set forth in this Chapter. Moreover, a commodity control agreement shall provide that, if the Organization decides that its operation has failed substantially to conform to the principles laid down in this Chapter, participating countries shall either revise the agreement to conform to the principles or terminate it.

3. Commodity control agreements shall include provisions relating to withdrawal of any party.

*Article 63. Settlement of Disputes*

Each commodity control agreement shall provide that:

(*a*) any question or difference concerning the interpretation of the provisions of the agreement or arising out of its operation shall be discussed originally by the Commodity Council;

(*b*) if the question or difference cannot be resolved by the Council in the terms of the agreement, it shall be referred by the Council to the Organization, which shall apply the procedure set forth in Chapter VIII with appropriate adjustments to cover the case of non-Members.

SECTION D. MISCELLANEOUS PROVISIONS

*Article 64. Relations with Inter-governmental Organizations*

With the object of ensuring appropriate co-operation in matters relating to inter-governmental commodity agreements, any inter-governmental organization which is deemed to be competent by the Organization, such as the Food and Agriculture Organization, shall be entitled:

(*a*) to attend any study group or commodity conference;

(*b*) to ask that a study of a primary commodity be made;

(*c*) to submit to the Organization any relevant study of a primary com-

modity, and, on the basis thereof, to recommend to the Organization that further study of the commodity be made or that a commodity conference be convened.

*Article 65. Obligations of Members regarding Existing and Proposed Commodity Agreements*

1. Members shall transmit to the Organization the full text of each inter-governmental commodity agreement in which they are participating at the time they become Members of the Organization. Members shall also transmit to the Organization appropriate information regarding the formulation, provisions and operation of such agreements. Members shall conform with the decisions made by the Organization regarding their continued participation in any such inter-governmental commodity agreement which, after review by the Organization, shall have been found to be inconsistent with the provisions of this Chapter.

2. Members shall transmit to the Organization appropriate information regarding any negotiations in which they are participating at the time they become Members of the Organization, for the conclusion of an inter-governmental commodity agreement. Members shall conform with decisions made by the Organization regarding their continued participation in any such negotiations. The Organization may dispense with the requirements of a study group or a commodity conference, if it finds them unnecessary in the light of the negotiations.

*Article 66. Territorial Application*

For the purposes of this Chapter, the terms "Member" and "non-Member" shall mean respectively a Member and non-Member of the Organization with its dependent territories. If a Member or non-Member and its dependent territories form a group, of which one or more units are mainly interested in the export of a commodity and one or more in the import of the commodity, there may be either joint representation for all the territories within the group or, where it is so desired, separate representation for the territories mainly interested in exportation and separate representation for the territories mainly interested in importation.

*Article 67. Exceptions to Provisions relating to Inter-governmental Commodity Agreements*

1. The provisions of this Chapter shall not apply:

(*a*) to any bilateral inter-governmental agreement relating to the purchase and sale of a commodity falling under Section D of Chapter IV;

(*b*) to any inter-governmental commodity agreement involving no more than one exporting country and no more than one importing country, and not covered by sub-paragraph (*a*) above; *Provided* that if, upon complaint of a non-participating Member, the Organization

finds that the interests of that Member are seriously prejudiced by the agreement, the agreement shall become subject to such provisions of this Chapter as the Organization may prescribe;

(*c*) to those provisions of any inter-governmental commodity agreement which are necessary for the protection of public morals or of human, animal or plant life or health; *Provided* that such agreements are not used to accomplish results inconsistent with the objectives of Chapter V or Chapter VI.

2. The provisions of Articles 55 and 56 and of Section C of this Chapter shall not apply to inter-governmental commodity agreements found by the Organization to relate solely to the equitable distribution of commodities in short supply.

3. The provisions of Section C of this Chapter shall not apply to commodity control agreements found by the Organization to relate solely to the conservation of exhaustive natural resources.

# APPENDIX B

## PREVALENCE OF CARTELS IN THE AMERICAN ECONOMY

HOW LARGE a part of the things Americans buy has been subjected to cartel controls? An exact answer is impossible for many reasons, partly because of lack of authentic information on cartels, partly because data on the way people use their incomes are neither complete nor up to date. But ignoring such matters as the amounts spent on personal and professional services and on rent, a computation of the proportion of all the commodities sold in the United States in a representative year that were cartelized, however loosely, gives an indication of the impact of the cartel movement on the American economy.

What is the criterion for determining whether a product is "cartelized"? As elsewhere throughout the present study, the test of cartelization used here is the existence of arrangements, whether among producers or among interested governments, either designed to or which do in fact limit or eliminate competition in the production or sale of the given class of goods on international markets. For purposes of the present survey it is immaterial whether the United States is a member of, or American producers are affiliated with, the particular commodity control scheme or cartel. The United States is not represented in the international tea restriction scheme, but this intergovernmental agreement obviously exerts considerable influence on American tea imports. No American company is a member of the Aluminum Alliance, but by regulating production and prices outside the United States the cartel has an inevitable effect on American purchases of aluminum abroad. It suffices here for treating a product as cartelized, therefore, if it is subject to international market controls broad enough to affect the supply of it in the American market.

Because comparable data are not available on sales of all kinds of goods, it is necessary to treat separately agricultural, mineral, and manufactured products. And because later data are now lacking, the best year to take for such a statistical study is 1939. The procedure, then, is to compare the 1939 market value of significantly cartelized agricultural products sold in the United States with the total value of such products sold, and to make similar comparison for minerals and manufactured goods.

The 1939 domestic production of all cartelized agricultural products amounted to $2,537,600,000, and the imports to $784,900,000, giving a

total of $3,322,500,000. (See Table A.)[1] But foreigners bought from Americans $129,400,000 worth of such farm products in 1939, so that the net total domestic sales were $3,193,100,000.[2]

Similarly, the 1939 domestic production of cartelized minerals amounted to $3,291,300,000, which with imports of this class of products totalling $302,000,000 brought total domestic supply to $3,593,300,000. (See Table B.)[3] But exports of cartelized mineral products reduced this figure by $361,600,000, leaving a net volume of domestic sales of cartel-controlled minerals approximating $3,231,700,000.[4] For cartelized manufactured products[3] the 1939 figures were: domestic production, $20,255,500,000; imports, $475,600,000; and exports, $1,435,900,000. (See Table C.) Thus, the net domestic sales of manufactured goods subject to cartel restrictions of one kind or another were in 1939 about $19,295,200,000.[5]

1. The numbered footnotes to Table A give sources of information for the classification, that is to say, for the designation of specific branches of agricultural industry as cartelized. In general, supporting citations are omitted wherever the cartel arrangements are a matter of common knowledge, the subject of review in *Cartels in Action*, or are mentioned and documented in the present volume.

2. Table A does not show either the total net volume of domestic sales or the total available supply of the commodities listed (*i.e.*, of farm products subject to cartel controls). It shows only the basic data from which these figures can be computed. Similarly, Tables B through F show only the basic data on domestic production, imports, and exports of the groups of commodities therein listed. (For description of the contents of these tables, see text following.) Table G brings together the aggregate figures from Tables A through F to determine the net volume of domestic sales (or purchases) of the three major classes of commodities—agricultural, mineral, manufactured—and the proportion of each that was cartelized.

3. As in Table A, numbered footnotes give the sources of information on which rests the classification of the listed product items as cartel-controlled, with omissions as already explained.

A product category as defined in government statistical reports sometimes covers several different kinds of goods, some of which are products of distinct industries. Part of such a group treated as a unit in the statistics may be subject to cartel controls, while another part may be supplied competitively. For example, "precious stones" covers all kinds of natural gems; as diamonds probably make up a substantial part of the total value of the group and as the De Beers Syndicate exercises a rigid control over diamond sales, the present study lists "precious stones" among cartelized minerals in Table B.

4. This figure approximates the 1939 value of domestic consumption of cartelized minerals (as the comparable figures for sales of cartelized agricultural and manufactured products approximate the domestic consumption of such products). It is not an exact equivalent, however, because it leaves out of account inventory changes.

5. The statistical data are not entirely homogeneous even among the different categories (*e.g.*, domestic production and imports) for each of the three major classes of products, let alone for the same category among different product classes. The various government agencies that collect the statistics use different bases of valuation. The Census of Manufactures reports "value of products" as the estimated value *at the factory* of the goods produced during the year, *whether or not sold.* On the other hand, the Bureau of Agricultural Economics reports farmers' "cash income" as the value of products *marketed* during the year, whether or not produced in that period. In foreign trade statistics, the reported export values include whatever freight cost the exporter may have incurred for transportation of the goods from point of production to port of exportation. Presumably both export and import values include some elements of selling expense and packaging cost. Probably these differences in basis of valuation affect the over-all picture only slightly.

Another qualification on the comparability of the statistics from different sources

To assess the importance of these data, it is necessary to place them in some frame of reference. The total value of all agricultural products sold in the United States in 1939 amounted, after making certain adjustments described below, to $6,990,200,000, representing total domestic production, plus imports, minus exports of such products. (See Table D.) This figure provides an appropriate basis for judging the significance of the fact that $3,193,100,000 of these farm products were subject to collective market control arrangements. Similarly, the total value (as adjusted) of all mineral products sold in the United States in 1939, both those that were subject to cartel controls and those sold in open, competitive markets, amounted to $3,717,600,000. (See Table E.) This figure provides an appropriate frame of reference for interpreting the economic significance of the fact that $3,231,700,000 of these mineral products were cartel-controlled. Likewise, a comparison of 1939 domestic purchases of cartelized manufactured goods with the $45,155,000,000 representing the aggregate value of all manufactured articles bought in the domestic market in that year (domestic production, plus imports, minus exports; see Table F) indicates the scope of the cartel movement in this sector of the national economy.

*Explanation of Methods Used in Assembling and Classifying the Data*

Partly to eliminate overlapping coverage among the three primary sources of statistics on domestic production (reports of the Departments of Agriculture, the Interior, and Commerce) and partly to provide a more rational division of the economy among agricultural, mineral, and manufacturing industries, several items were transferred from one major division to another. For example, in computing aggregate domestic production of minerals (Table E), the present study eliminates from the total four items—cement, lime, mineral paints, and salt—which the Bureau of Mines treats as part of minerals production.[6] These products appear in Table F as part of the aggregate

arises from differences in the geographic area covered. Data on domestic agricultural and manufacturing production relate solely to the continental United States. On the other hand, export and import data cover the entire United States "customs area," which in 1939 included Alaska, Hawaii, Puerto Rico, and the Virgin Islands. Part of the mineral production data report operations in the continental area only, part in the whole United States customs area. See *Statistical Abstract of the United States, 1942,* Department of Commerce, Washington, 1943, pp. 563, 694, 837, 885.

Still a third qualification arises from differences in product classification. In some cases, a product category in one of the four main original sources of data for these tables—*Agricultural Statistics, Census of Manufactures, Minerals Yearbook,* and *Foreign Commerce and Navigation of the United States*—does not correspond exactly with the generally comparable category in one or more of the other sources. For example, the commodity group "other metals and ferroalloys" in Table B is based on the trade statistics (imports and exports), and this is slightly broader than the category "other metals" in the Bureau of Mines *Minerals Yearbook.* Such differences in classification are not of great importance in the present connection. In general, the present study adopts the Bureau of Agricultural Economics classification for farm products, the trade statistics classification for mineral products, and the census classification for manufactured products.

6. The "minerals" classification includes the whole group of nonferrous metals. These appear also in the "manufactures" group. But this double counting does not

domestic production of manufactures. Again, Table D lists fish and furs as additions to reported total domestic agricultural production, and Table F shows subtraction of these items from the total value of manufactures. These transfers merely adjust the statistical aggregates to bring them nearer to conformity with common usage.[7]

Omitted from Tables D, E, and F are certain products not susceptible of cartelization because their physical characteristics practically limit their distribution to local or regional markets. Products not normally exchanged in international trade are outside the potential scope of the cartel movement. Hence it would be misleading to include them in the base for estimating how far cartelization has gone. The proper base comprises the aggregate sales volume of only those agricultural, mineral, and manufactured products that might be cartelized.

The products not amenable to cartel controls fall into three main groups: perishables, household or industrial auxiliaries, and bulky, low-value-per-unit goods. Fluid milk, ice cream, and bread are examples of the first group. Newspapers and dyeing and finishing services illustrate the second. Sand and gravel, tombstones, and brick are examples of the third. Table D subtracts two perishable items from the aggregate agricultural production—fresh eggs and fluid milk. Of mineral products on the Bureau of Mines list the present study (Table E) dropped four—three because of their bulkiness and low

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seriously impair the results of the study—first, because of the integrated form of business organization common in these industries, the cartel controls operate, in effect, on every stage from extraction of the ore to sale of the refined metal; and second, the Bureau of Mines uses a different basis of valuation from that used in the Census of Manufactures. In general, it takes the value of the metal at the smelting stage. The Census of Manufactures reports the value of the refined metal and includes not only metal refined from domestic ores but also that refined from imported ores. The value of 1939 domestic production of copper, for example, in the minerals classification was $148,200,000, while it was $2,019,000,000 in the manufactures group.

Unquestionably the procedure outlined involves some double counting. Inclusion of nonferrous metals in both the minerals and the manufactures group might be objectionable if the group totals were added together. As the present study makes no attempt to consolidate the results of the survey of cartel activity in the three major divisions of the economy canvassed—agriculture, mining, and manufacturing—such double counting as occurs is not a serious flaw.

7. All told, the transfers from manufactures to agriculture numbered eight: sugar, meat, fish (canned), vegetable and animal oils, oleomargarine, tallow, dyeing and tanning materials, and dressed and dyed furs (not including fur manufactures). Though others than farmers process most of these products to some extent in preparing them for market, they are not fabricated commodities and the cost of raw materials represents the major part of their value. Farmers, lumbermen, or fishermen provide these raw materials and probably most people would call the commodities in question agricultural products, using the term in a broad sense.

The basis of valuation of sugar was the value of raw (cane) sugar imports, plus a figure representing the difference between "value of products" and "value added by manufacture" in the beet sugar refining and the domestic cane sugar refining industries. The basis of valuation of meats was the cash value of livestock marketed. But the alternative basis, using Census of Manufactures data, would have given a virtually identical result. The difference between gross "value of products" and "value added by manufacture" in wholesale meat-packing establishments was, in 1939, $2,271,000,000. Farm cash income from sale of livestock in that year was $2,226,000,000.

value per unit—brick, stone (including slate), and sand and gravel—and one—natural gas—because it provides a household and industrial auxiliary service, not transportable overseas. Table F lists the twelve manufacturing industries in the census classification with products of a nature that virtually excludes them from international trade.[8]

Table G brings together the results of the computations set out in Tables A-F and shows that the proportion of cartel-regulated sales to total sales was 45.68 per cent for agricultural products, 86.93 per cent for mineral products, and 42.73 per cent for manufactured products. These figures provide no basis, of course, for estimating how much cartel restrictions cost American consumers in 1939. But the percentages do indicate the extent to which the cartel movement had penetrated these three sectors of the American economy before the war. On the basis of a definition of cartels that includes both intergovernmental commodity agreements and private market control schemes, for several reasons the percentage figures shown probably do not exaggerate the scope of the movement.

First, probably a number of cartels exist, some wholly foreign and some with domestic affiliations, that bear directly on the American market and yet their existence has not come to light. Many cartels are secret and it is doubtful that official and private investigations have uncovered all of them. Second, the influence of a cartel often extends beyond the branch of production to which its restrictions directly apply. For example, the metal-refining branch of the copper industry by no means exhausts the range of influence, in domestic markets, of the cartel members. At least two of the "big four" copper companies have carried integration forward from metal refining to fabrication. Yet, lacking evidence that the jurisdiction of the international copper cartel extended to brass and bronze products, the present study has treated them as a noncartelized branch of manufactures. Only copper smelting and refining fall in the cartelized group of manufacturing industries under the procedure followed here. For similar reasons, this survey probably understates the extent of influence of the steel cartel and others.

It is true that the survey omits several broad sectors of the national economy. These include the construction industry, wholesale and retail distribution, public utility services, and personal service trades, such as laundries, hotels, and barber shops, as well as the professions. Probably in most of these lines of economic activity no international cartel operates. But in any case it would be necessary to exclude most of them from the base (*total* goods sold), because the services they perform are not exportable. An international laundry cartel may not be impossible, but it is certainly incredible.

The situation is different for several public utility services. Telegraph, telephone, radio, insurance, and aviation are not necessarily restricted to a

8. Some of these, like bread and manufactured ice, are perishable. Others, like tombstones and concrete products, are bulky and of low value per unit. Still others, like newspapers, electroplates, and dyeing and finishing operations, are household or industrial auxiliaries.

local sphere of operations. These services are, therefore, clearly susceptible of international cartelization. Moreover, they have actually been subjected to cartel controls. An extension of the survey to embrace public utility services would probably show that cartels have occupied an even larger part of the potential field of cartelization in this sector of the economy than in any of the three major divisions surveyed. The present study omits public utilities from the survey only because the economic characteristics of these industries set them apart from others. Public policy has generally recognized their special character and provided for their administrative regulation or public ownership.

In assessing the results of the survey, obviously much depends on the accuracy of the classification of products as cartelized or noncartelized. These tables reflect simply the judgment of the authors. Other students might reach different conclusions on the treatment of specific items, and so obtain different results. But if the criteria adopted here are accepted, disagreements over the classification of particular items probably would not in most cases greatly affect the results. Whether, for example, mica is included in or omitted from the cartelized group of mineral products would not make much difference in the percentage of mineral products that the present study finds were cartelized.[9]

Again, although another investigator might drop from the cartelized group some products that this study lists in that classification, he would probably add certain other items that this study omits from that list. For example, Hexner hesitates to classify vegetable oils and fats among cartelized commodities, but the main ground for his uncertainty is that the market controls in this field rest more on financial consolidation and interpenetration than on contractual agreements.[10] This distinction is one of form rather than of substance, and the present study disregards it. Mason, on the other hand, makes light of the distinction between financial consolidation or community of interests and multi-party agreements to regulate the market.[11] But he distinguishes sharply between private cartels and intergovernmental commodity agreements. Thus he would probably omit sugar and rubber from a list of cartelized commodities.

Even when they use the same definition of a cartel, students may differ on the classification of a few items so important that their treatment as cartelized or noncartelized will substantially affect the percentage figure for the given class of products. For sometimes the facts supporting and the facts weighing against classification of a major commodity in the cartelized group

9. Specifically, to include mica in the list of cartelized commodities would increase the percentage of products cartelized three hundredths of one per cent, or from 86.93 to 86.96. Though mica is essential in the manufacture of many types of electrical apparatus, the net domestic supply in 1939 amounted only to $1.3 million.

10. See Ervin Hexner, *International Cartels,* University of North Carolina Press, Chapel Hill, 1945, pp. 200-01 and Chap. 2.

11. See Edward S. Mason, *Controlling World Trade,* McGraw-Hill, New York, 1946, pp. 20-25 and Chaps. 5, 7.

are evenly balanced. This study treats hides and skins, wool, and dressed pork and pork products, for example, as noncartelized commodities. But at an earlier stage of the investigation these products were listed with the cartelized group of agricultural commodities. On that basis, approximately 59.2 per cent of the total agricultural products marketed in 1939 were subject to cartel controls.[12] The percentage is almost 14 points higher than that obtained—45.6 per cent—when hides and skins, wool, and pork products are omitted from the cartelized group.[13]

No specific arrangements for regulating these branches of international trade in livestock products during the thirties have come to light.[14] The Argentine–United Kingdom meat agreement covers only dressed beef; and the arrangements of the New Zealand Meat Producers' Board with United Kingdom authorities regulate only mutton and lamb supplies in the world's largest meat-importing market.[15] Lacking evidence of a comparable scheme for dressed and cured pork products and hides, this study omits them from the cartelized group of agricultural commodities.

But the grounds for classifying fresh pork, bacon, and hides as cartelized products are strong. The same packing houses that handle cattle and sheep also handle hogs, as well, of course, as hides. The "big four" packers have relatively as large a share of the pork, bacon, and lard trade as they have of the beef and mutton trade, and it is difficult to believe that their business policies in one branch of the meat trade differ in any important respect from those they follow in other branches. These big American packing companies are the dominant factors in the Argentine-British beef trade and official reports show that they concertedly regulated that trade by mutual agreement long before the British and Argentine Governments signed their meat pact.[16] This pact, in effect, officially sanctioned customary trade practice and pro-

12. This was the tentative estimate reported in *Cartels in Action,* Chap. 1.

13. The explanation of this wide difference in results is obvious: hogs alone were in 1939 the source of about 10 per cent of farm cash income—from potentially cartelizable farm products. Specifically, the net domestic supply of slaughtered hogs in 1939 amounted to about $800 million.

14. The grounds for originally treating wool as a cartelized commodity were: (1) the operations of the Australian wool pool in the twenties, and (2) the establishment of the International Wool Secretariat in London in 1936. But the restriction of this survey to cartels operating in the thirties eliminated the first ground, and it appears IWS confined its activities to research and propaganda. See J. W. F. Rowe, "Artificial Control Schemes and the World's Staples," *Index,* Svenska Handelsbanken, Stockholm, April 1935, Vol. X, p. 75; and J. S. Davis, "Experience Under Intergovernmental Commodity Agreements," *Journal of Political Economy,* June 1946, p. 217.

15. For references see footnotes 1 and 2 under Table A.

16. *Report of the Royal Commission on Food Prices,* Cmd. 2499, London, 1925, Vol. I, pp. 105 ff., especially pp. 116-18; *Report on the Trade in Refrigerated Beef, Mutton and Lamb,* Economic Series No. 6, Agriculture and Fisheries Board, London, 1925; and *Report of the Interdepartmental Committee on Meat Supplies,* Cmd. 456, London, 1919, which states (p. 10): "It is claimed that the combination of the meat companies extends only to the pooling of tonnage, and involves no further cooperation; but such pooling is one of the best known forms of Kartell. . . . Rivalry in purchase of cattle ceases to be necessary, and, as each of the companies in the conference has full knowledge of what meat is coming forward and what the others are doing, there need be no rivalry in selling."

vided a measure of public responsibility. It is hard to imagine that the same companies have acted competitively in conducting meat export business from their American packing houses or in importing hides from their Argentine branches.

On still other grounds one could defend classification of pork products in the cartelized group of agricultural commodities. The operations of Britain's Bacon Development Board since 1935 point to an administrative regulation of that important potential export market for American cured pork products that in basic essentials resembles the beef and mutton control schemes. Strengthened by the Bacon Industry Act of 1938, the Board regulates supplies of cured pork products and adjusts import quotas to stabilize the market.[17]

Such facts explain the original classification in this study of pork products and hides, along with other packing-house products, among cartelized agricultural commodities. They also make plain the inescapable role of judgment in determining the scope of the cartel movement. However, the balance of pro and con factors for listing a given class of products in the cartelized category is seldom so nearly even as in this case. Probably few would question that coffee, rubber, steel, copper, aluminum, matches, rayon, optical goods, agricultural implements, dyes, fertilizers, explosives—indeed, the majority of the items listed in Tables A, B, and C—have been subject to collective market controls.

Another fact, in addition to possible differences of opinion on classification, limits the significance of the statistical findings. This concerns the impossibility of measuring the effectiveness of cartel controls. Unquestionably, in some fields, for example aluminum and diamonds, the cartels are more powerful than in others, such as sugar and rayon. As statistics cannot gauge these differences quantitatively, this study shows only that before the war cartels had some influence on the markets for 45.6 per cent of the agricultural products, 86.9 per cent of the mineral products, and 42.7 per cent of the manufactured products that the American people bought. Many of the cartel controls in the agricultural field were the outgrowth of government intervention, however, while most of those affecting minerals and all of those affecting manufactures originated in private action of producers. For some purposes this distinction is important.

17. See W. H. Jones, "The Agricultural Marketing Boards," in W. A. Robson (Ed.), *Public Enterprise,* G. Allen & Unwin, London, 1937, pp. 247 ff.; and R. E. Cushman, *The Independent Regulatory Commissions,* Oxford University Press, New York, 1941, pp. 560-62.

GENERAL NOTE: For brevity in footnotes to the appendix tables, federal judicial districts have been abbreviated as follows: United States District Court, USDC; Northern District of Illinois, ND of Ill.; Western District, WD; etc. Refer to the Bibliography for full citations of books, pamphlets, and congressional committee documents.

# TABLE A

## CARTELIZED AGRICULTURAL PRODUCTS, UNITED STATES, 1939

*(In Millions of Dollars)*

| Commodity | Domestic Production | Imports | Exports |
|---|---|---|---|
| Total for the group | 2,537.6 | 784.9 | 129.4 |
| Livestock products | | | |
| Beef [1] | 1,290.0 | 23.8 | 8.0 |
| Mutton [2] | 172.0 | 0.9 | 0.2 |
| Bone Glue [3] | 34.3 | — | — |
| Wheat | 432.0 | 6.0 | 36.8 |
| Cocoa, coffee, and tea [4] | 0.0 | 188.9 | 3.4 |
| Raw sugar | 113.4 | 124.6 | 0.5 |
| Rubber | 0.0 | 181.1 | 0.0 |
| Cinchona bark and opium [5] | 0.0 | 1.6 | 0.0 |
| Copra [6] | 0.0 | 6.7 | 0.0 |
| Vegetable oils and fats [7] | 211.3 | 40.3 | 2.0 |
| Dyeing and tanning materials [8] | 15.6 | 8.3 | 1.7 |
| Tobacco leaf [9] | 269.0 | 36.9 | 76.8 |
| Jute and burlap [10] | 0.0 | 32.2 | 0.0 |
| Manila and sisal [11] | 0.0 | 12.8 | 0.0 |
| Raw silk | 0.0 | 120.8 | 0.0 |

*Sources for data*

*Statistical Abstract of the United States,* year of issue and number of table as identified below.

*Production*

Wheat: *1941,* Table 664.

Sugar: beet sugar (value of product minus value added, as computed from Census of Manufactures) plus cane and sorghum: *1942,* Table 736.

Vegetable oils and fats: linseed, soybean and cottonseed oils (as classified in Census of Manufactures; value of product minus value added, as computed from this classification) minus imports of these seeds: *1943,* Table 876. The figure thus computed is slightly higher than the Bureau of Agricultural Economics estimate of 1937 farm cash income from oil-bearing crops, which was $193.4 million (see: *1940,* p. 638).

Dyeing and tanning materials: tanning materials, natural dyestuffs, etc. (as classified in Census of Manufactures; value of product minus value added minus imports of dyeing and tanning materials, as computed from this classification): *1943,* Table 876.

All others: *1943,* Table 672.

*Imports:* For bone glue, data cannot be segregated from over-all figures for the large group of miscellaneous products, "other animals and animal products, inedible." Beef and mutton, vegetable oils and fats, dyeing and tanning materials, and tobacco leaf calculated from data in: *1943,* Tables 584, 701. All others:

*1942,* Tables 619, 620 (based on data from Bureau of Foreign and Domestic Commerce).

*Exports:* For bone glue, data cannot be segregated from over-all figures for the large group of miscellaneous products, "other animals and animal products, inedible." Beef and mutton and tobacco leaf calculated from data in: *1943,* Tables 582, 701. All others: *1942,* Table 618 (based on data from Bureau of Foreign and Domestic Commerce).

*Sources for information on cartelization*

1. *Report of Joint Committee of Enquiry Into the Anglo-Argentine Meat Trade,* Cmd. 5839, Board of Trade, London, 1938. See especially pp. 16-19.

See also *U.S.* v. *Swift & Co., et al.,* Indictment returned November 28, 1941, in USDC, SD of Ill., Criminal No. 33033. The indictment in this case charges that in the principal packing-house centers defendants apportion purchases of cattle and other livestock among themselves on an agreed basis and regulate their bids accordingly. The case is still pending.

2. *Mutton and Lamb Survey,* Series 3, Imperial Economic Committee, London, 1935. See especially pp. 7, 22-24.

See also *U.S.* v. *American Meat Institute, et al.,* Indictment returned June 19, 1941, in USDC, ND of Ill., Criminal No. 32776, charging restraints of trade in mutton similar to those alleged in the Swift & Co. case described above. In February 1947 this case was still pending.

3. Ballande, p. 70. This handbook gives detailed information on the organization and record of cartels in many fields.

4. On cocoa, see *Report of the Commission on the Marketing of West African Cocoa,* Cmd. 5845, Colonial Office, London, 1938; and *Report on Cocoa Control in West Africa,* Cmd. 6554, *idem,* London, 1944.

5. Ballande, pp. 49-55; and Holland, pp. 293-376.

See also *U.S.* v. *Amsterdamsche Chininefabriek, et al.,* Complaint filed March 29, 1928, in USDC, SD of N.Y., Equity No. 44-384, charging cartel restrictions on imports of quinine and cinchona bark. On March 2, 1929 the court entered a consent decree in this cause.

6. *An Economic Survey of the Colonial Empire* (1937), Colonial No. 179, Colonial Office, London, 1940, pp. 182 ff.

7. *Ibid.,* p. 586; *Survey of Oil Seeds and Vegetable Oils,* Series 2, Vol. III, Imperial Economic Committee, London, 1934; Ballande, pp. 133-42; and Plummer, pp. 35-39.

8. Staley, *Raw Materials in Peace and War,* pp. 287-88; and Kilgore (*Scientific and Technical Mobilization*), Pt. IX, pp. 1047-115.

See also *U.S.* v. *Tannin Corp., et al.,* Indictment returned November 24, 1942, in USDC, SD of N.Y., Criminal No. 113-260, charging restraint of trade in quebracho. Three defendants in this case pleaded *nolo contendere* on January 12, 1943, four entered the same plea on April 19, 1943, and paid fines. See also *U.S.* v. *Forestal Land, Timber, & Rys. Co., Ltd., et al.,* Complaint filed December 20, 1943, in USDC, SD of N.Y., Civil No. 23-150, also alleging cartel restrictions on imports of quebracho. The court entered a consent decree in this cause on December 12, 1945, but for some defendants the case is still pending.

9. Plummer, pp. 70-72; Ballande, p. 299; and Reynolds pp. 8, 14. See also *American Tobacco Co., et al.,* v. *U.S.,* 328 U.S. 781 (1946).

10. *State Action in Respect of Industries, 1928–1935,* Bulletin of Indian Industries and Labor, No. 57, Government of India, Simla, 1936, pp. 55-56; and Staley, *Raw Materials in Peace and War,* p. 273.

11. Staley, *Raw Materials in Peace and War,* pp. 75-78, 297-98; and *U.S.* v. *Sisal Sales Corp.,* 274 U.S. 268 (1927). For subsequent proceedings in this case, see *The Federal Antitrust Laws,* Department of Justice, Washington, January 1938, pp. 206-07.

## TABLE B

CARTELIZED MINERALS, UNITED STATES, 1939

*(In Millions of Dollars)*

| Mineral | Domestic Production | Imports | Exports |
|---|---|---|---|
| Total for the group | 3,291.3 | 302.0 | 361.6 |
| Fuels | | | |
| Coal—anthracite [1] | 187.2 | 1.9 | 19.9 |
| Coal—bituminous [2] | 728.2 | 1.2 | 42.8 |
| Petroleum [3] | 1,294.5 | 23.3 | 92.8 |
| Metals | | | |
| Tin | 0.0 | 71.0 | 0.0 |
| Bauxite | 2.2 | 6.9 | 1.1 |
| Copper | 148.2 | 44.1 | 85.6 |
| Lead [4] | 39.6 | 7.2 | 4.5 |
| Magnesium | 4.0 | 0.0 | 0.8 |
| Mercury | 1.9 | 0.3 | 0.1 |
| Nickel | 0.0 | 29.1 | 5.1 |
| Zinc | 51.1 | 3.5 | 1.9 |
| Pig iron | 626.8 | 1.0 | 59.3 |
| Manganese [5] | 2.9 | 11.6 | 0.2 |
| Molybdenum [5] | 22.2 | 0.0 | 14.1 |
| Tungsten [5] | 4.4 | 1.5 | 0.9 |
| Other metals and ferroalloys [5] | 81.2 | 13.4 | 6.8 |
| Nonmetallic minerals | | | |
| Abrasives—crude [6] | 1.2 | 3.8 | 1.4 |
| Asbestos | 0.5 | 9.0 | 0.2 |
| Asphalt [3] | 3.1 | 0.6 | 0.6 |
| Boron [7] | 5.7 | 0.0 | 0.0 |
| Bromine [8] | 7.6 | 0.0 | 0.0 |
| Graphite [9] | 1.0 | 0.4 | 0.1 |
| Gypsum [10] | 4.4 | 1.2 | 0.1 |
| Magnesite [11] | 1.5 | 0.9 | 0.0 |
| Magnesium compounds [12] | 2.2 | 0.2 | 0.3 |
| Phosphates [13] | 12.3 | 0.4 | 6.4 |
| Potassic fertilizer materials | 12.0 | 5.8 | 4.4 |
| Pyrites [14] | 1.6 | 1.3 | 0.0 |
| Sodium salts [15] | 2.6 | 11.2 | 0.0 |
| Sulphur [16] | 35.5 | 0.0 | 11.7 |
| Precious stones [17] | 0.3 | 50.2 | 0.2 |
| Other nonmetallic minerals | 5.4 | 1.0 | 0.3 |

*Sources for data*

*Statistical Abstract of the United States,* year of issue and number of table as specified. Production: *1941,* Table 796 (based on data from *Minerals Yearbook,* Bureau of Mines). Imports: *1942,* Table 619. Exports: *1942,* Table 618.

*Comments*

*Bauxite:* Imports include scrap metal; exports do not, because in customs data it is lumped with virgin ingot.

*Magnesium:* Exports are in terms of estimated exports of ingot metal.

*Other metals and ferroalloys:* Includes antimony, cadmium, chromite, cobalt, selenium, tellurium, titanium, uranium, and vanadium.

*Graphite* and *precious stones:* Data for one or more items were estimated, on account of nondisclosure, absence of canvass, or for other reasons.

*Other nonmetallic minerals:* Includes numerous minor nonmetallic minerals, such as barite and cryolite.

*Sources for information on cartelization*

1. "Report of Morris L. Ernst Submitted to the Governor of Pennsylvania," Anthracite Coal Industry Commission, May 17, 1937, pp. 4-8. For background material, see Eliot Jones, *The Anthracite Coal Combination in the United States,* Harvard University Press, Cambridge, 1915; and H. S. Raushenbush, *The Anthracite Question,* Wilson, New York, 1924.

See also *U.S.* v. *Glen Alden Coal Co., et al.,* Indictment returned January 6, 1943 in USDC, SD of N.Y., Criminal No. 113-391, against 29 anthracite coal companies and certain of their officers, charging an agreement to fix prices in violation of the antitrust laws. The defendants entered pleas of *nolo contendere* on May 2, 1944 and paid fines.

2. R. H. Baker, *The National Bituminous Coal Commission, 1937–1941,* Johns Hopkins University Press, Baltimore, 1941. (An appendix to this study contains an excellent bibliography.) See also Ballande, p. 245; *Report of the British Coal Delegation to Sweden, Norway, and Denmark,* Cmd. 3702, Mines Department, London, 1930, pp. 10-11; and *The International Coal Trade,* International Labor Office, Geneva, 1938, Vols. I, II.

3. Ballande, pp. 292-96; Plummer, pp. 34, 62-63; W. J. Kemnitzer, *The Rebirth of Monopoly,* Harper, New York, 1938, *passim;* and sources cited in *Cartels in Action,* Chap. 11.

See also *U.S.* v. *Ethyl Gasoline Corp., et al.,* 309 U.S. 436 (1940); and *U.S.* v. *General Petroleum Corp., et al.,* Indictment returned November 14, 1939, in USDC, SD of Calif., Criminal No. 14149-M, charging an agreement among 39 corporations to fix prices. In May 1940 defendants pleaded *nolo contendere* and paid fines.

4. Hexner, *International Cartels,* pp. 228-30.

5. Ballande, p. 79; Wallace and Edminster, pp. 347-48; and Elliott, *et al.,* p. 153 and *passim.*

See also *U.S.* v. *Climax Molybdenum Co., et al.,* Complaint filed August 9, 1942, in USDC, SD of N.Y., charging a conspiracy among five domestic and foreign companies to divide world markets and control prices. The court entered a consent decree in this cause on August 21, 1942. See also *U.S.* v. *National Lead Co., et al.,* Complaint filed June 24, 1944, in USDC, SD of N.Y., Civil No. 26-258, charging restraints of interstate and foreign commerce in titanium products through cartel agreements. After a trial that ran from December 4, 1944 to July 5, 1945, the court held defendants guilty of violations of the antitrust laws and entered an order requiring them, among other things, to grant all applicants nonexclusive, uniform licenses under certain patents, subject to reasonable royalties.

6. *Minerals Yearbook, 1935,* Bureau of Mines, Washington, 1936, p. 890; *ibid., 1936,* p. 1297; and *idem, Report on Abrasives, 1938,* p. 13.

7. Plummer, p. 64; Hexner, *International Cartels,* pp. 304-05; and TNEC Monograph No. 21, pp. 110-11.

8. Ballande, p. 115.

9. Hexner, p. 254; G. A. Roush (Ed.), *The Mineral Industry, 1939,* McGraw-Hill, New York, 1940, Vol. XLVIII, p. 290.

10. TNEC Monograph No. 10, Chap. 3. See also *U.S.* v. *U.S. Gypsum Co., et al.,* Complaint filed August 15, 1940, in USDC, D. of Columbia, Civil No. 8017, alleging a combination of six companies to fix prices and control production of gypsum products. The court entered a judgment of dismissal on August 6, 1946 (67 Fed.Supp. 397), and the government's appeal to the Supreme Court is now pending.

11. Hexner, p. 255; and Ballande, p. 90. See also *U.S.* v. *Harbison-Walker Refractories Co., et al.,* Indictment returned January 20, 1941, in USDC, SD of N.Y., Crimi-

nal No. 109-176, charging cartel restrictions on magnesite imports and control of prices. Domestic defendants pleaded *nolo contendere* on July 22, 1941, and paid fines. The case against foreign defendants is still pending. Another case based on the same cartel arrangements led to a similar outcome. See *U.S.* v. *American Refractories Institute, et al.,* Indictment returned June 23, 1941, in USDC, ED of Pa., Criminal No. 9108; *nolo* pleas entered July 9, 1941.

12. Plummer, p. 13.

13. *Phosphates and Super-Phosphates,* Second Series, Report No. 100, U.S. Tariff Commission, Washington, 1935, p. 10; Ballande, pp. 105, 116.

14. Ballande, p. 91.

15. TNEC Monograph No. 6, p. 268.

16. *World Chemical Developments, 1938,* Bureau of Foreign and Domestic Commerce, Washington, 1939, pp. 4-5; and TNEC Monograph No. 21, pp. 108-09.

17. Ballande, p. 91; and Hexner, p. 252. See also *U.S.* v. *De Beers Consolidated Mines, Ltd., et al.,* Complaint filed January 29, 1945, in USDC, SD of N.Y., Civil No. 29-446, against nine foreign corporations and their American representatives, charging restraint of trade and monopolization in gem and industrial diamonds. The Supreme Court held invalid an injunction to restrain defendants, *pendente lite,* from removing their United States assets to foreign countries [325 U.S. 212 (1945)], and the case is now awaiting trial.

## TABLE C

CARTELIZED MANUFACTURES, UNITED STATES, 1939

*(In Millions of Dollars)*

| Product | Domestic Production | Imports | Exports |
|---|---|---|---|
| Total for the group | 20,255.5 | 475.6 | 1,435.9 |
| Industry groups | | | |
| Tobacco products [1] | 1,322.2 | 3.6 | 14.9 |
| Paper and allied products (pulp, paper and paperboard mills, coated and glazed paper) [2] | 1,244.3 | 194.7 | 17.5 |
| Chemicals [3] | 3,061.9 | 89.9 | 168.5 |
| Products of petroleum and coal | 2,954.0 | 21.7 | 296.2 |
| Iron and steel products (steel works and rolling mills, tinware, wire products) | 3,440.8 | 11.4 | 167.7 |
| Electrical machinery and equipment [4] | 1,727.4 | 2.0 | 105.2 |
| Industrial machinery (except electrical and agricultural) [5] | 2,832.3 | 8.0 | 328.4 |
| Separate industries or branches | | | |
| Sewing thread [6] | 51.4 | 0.3 | 1.3 |
| Linoleum, oilcloth and artificial leather [7] | 113.3 | 0.3 | 1.3 |
| Cork products [8] | 17.7 | 4.4 | 1.1 |
| Matches [9] | 25.6 | 0.8 | 0.0 |
| Rayon | 247.1 | 9.2 | 1.0 |
| Glass (pressed and blown) [10] | 358.0 | 5.1 | 10.4 |
| Cement [11] | 192.6 | 1.9 | 2.4 |
| Gypsum products | 46.2 | 1.2 | 0.0 |
| Abrasives | 71.3 | 0.3 | 4.2 |
| Asbestos products [12] | 60.8 | 0.1 | 2.8 |
| Refractories | 69.1 | 0.0 | 4.1 |
| Aluminum and aluminum products | 206.9 | 1.5 | 23.7 |
| Other nonferrous metals and products | 1,401.7 | 106.5 | 115.0 |
| Agricultural machinery [13] | 167.9 | 3.0 | 20.5 |
| Aircraft—parts and engines [14] | 279.5 | 0.0 | 117.8 |
| Photographic goods [15] | 133.9 | 7.9 | 19.1 |
| Optical goods and scientific instruments [16] | 229.6 | 1.7 | 12.7 |

*Sources for data*

*Statistical Abstract of the United States,* year of issue and number of table as specified. Production: *1943,* Table 876 (based on data from Census of Manufactures). Imports: *1942,* Table 620 (based on data from *Foreign Commerce and Navigation of the United States,* Bureau of Foreign and Domestic Commerce). Exports: *1942,* Table 618 (derived as was Table 620).

*Comments*

The classification of industries conforms with that used in Census of Manufactures reports. Not all are major industrial groups. Cartelization is more inclusive in some fields than in others.

*Chemicals:* Production figure includes the entire chemical category in the Census of Manufactures minus salt (which is not cartelized), rayon (which is separately listed), and "expressed oils," "other animal and vegetable oils," and "tanning materials." The last three items were transferred to agriculture. The import and export figures shown do not check with the corresponding figures in the customs reports ("Group 8—Chemicals"), because the census category "Chemicals" is more comprehensive, embracing several items reported by the customs authorities under other headings. Chemical imports and exports include all of "Group 8—Chemicals" except natural fertilizer materials and crude iodine plus gums and resins and drugs and herbs.

*Rayon:* A chemical product, rayon is classified separately because it is largely produced by specialty companies rather than by general chemical companies.

*Aluminum and aluminum products:* Composed as follows: Domestic production—alloying, rolling, and drawing of aluminum and finished products except electrical appliances. Imports—plates, sheets, bars, etc., and finished products. Exports—ingots, scrap, and alloys; plates, sheets, bars, etc., castings, and finished products.

*Other nonferrous metals and products:* Composed as follows: Domestic production—primary smelting of nonferrous metals and rolling and drawing of nonferrous metals except aluminum. Imports and exports comprise:

| | Imports | Exports |
|---|---|---|
| Copper | 1.8 | 97.1 |
| Lead | 4.8 | 5.6 |
| Nickel | 25.3 | 5.1 |
| Tin | 69.8 | 1.1 |
| Zinc | 1.9 | 2.3 |
| Antimony | 0.2 | 0.0 |
| Cobalt | 2.7 | 0.0 |
| Babbitt metal | 0.0 | 0.4 |
| Nickel chrome wire | 0.0 | 0.6 |
| Mercury | 0.0 | 0.1 |
| Other metals | 0.0 | 2.7 |
| | 106.5 | 115.0 |

*Sources for information on cartelization*

1. See footnote 9 to Table A; also *Cigar Industry,* Report No. 62, U.S. Tariff Commission, Washington, 1933, p. 14.

2. *Wood Pulp and Pulpwood,* Report No. 126, Second Series, U.S. Tariff Commission, Washington, 1938, pp. 118-19; and Ballande, pp. 223-31. See also *U.S.* v. *Crown Zellerbach Corp., et al.,* Indictment returned July 12, 1939, in USDC, ND of Calif., Criminal No. 26, 680-S, charging four American and three Canadian companies with restraint of interstate and foreign commerce in newsprint. On the same day six defendants pleaded *nolo contendere* and paid fines. See also *U.S.* v. *Kraft Paper Association, et al.,* Complaint under the antitrust laws filed September 10, 1940, in USDC, SD of N.Y., Civil No. 10-329. On the same day a consent decree was entered enjoining

the practices of which the government complained. See also *U.S.* v. *American Waxed Paper Association, et al.*, Indictment returned under the antitrust laws January 7, 1942, in USDC, ED of Pa., Criminal No. 9319. On June 15, 1942 and December 14, 1942, pleas of *nolo contendere* were entered for the association, 44 corporations and 61 individuals, and these defendants paid fines. See also *U.S.* v. *National Container Ass'n., et al.*, Indictment returned under the antitrust laws, August 9, 1939, in USDC, SD of N.Y., Criminal No. 105-445, and Complaint filed against the same group, in the same court, April 20, 1940, Civil No. 8-318. Defendants pleaded *nolo contendere* to the indictment on August 22, 1940, and certain of them paid fines. In the civil action a consent decree was entered on April 23, 1940.

3. In addition to the sources cited in *Cartels in Action*, Chaps. 4, 9, 10, 11, see *U.S.* v. *Allied Chemical & Dye Corp., et al.*, Indictment returned May 14, 1942, in USDC, D. of N.J., Criminal No. 753-C, charging restraint of interstate and foreign commerce in dyestuffs. The case was postponed on June 3, 1942, for the duration of the war. On March 21, 1946 and April 18, 1946, fifteen defendants pleaded *nolo contendere* and paid fines. See also *U.S.* v. *General Dyestuff Corp., et al.*, Indictment under the antitrust laws returned December 19, 1941, in USDC, SD of N.Y., Criminal No. 111-135. After postponement for duration of the war, this case in the spring of 1947 was awaiting trial under an order entered January 27, 1947. See also *U.S.* v. *Borax Consolidated, Ltd., et al.*, Information (Criminal No. 28, 900-S) and Complaint (Civil No. 23, 690-G), both filed on September 14, 1944, in USDC, ND of Calif., charging restraint of trade in borates. Defendants pleaded *nolo contendere* in the criminal action and paid fines on August 16, 1945. On the same date, a consent decree was entered in the civil case, giving the government the relief it sought.

In the following six cases, indictments were returned on the same day, June 26, 1942, in the same court, USDC, ND of Ill., charging restraints of trade in (in the order of listing): sulphuric acid, chromic acid, oxalic acid, formic acid, muriatic acid, and bichromates of soda and potash. *U.S.* v. *Monsanto Chemical Co., et al.*, Criminal No. 1265; *U.S.* v. *E. I. du Pont de Nemours & Co., et al.*, Criminal No. 1266; *U.S.* v. *Victor Chemical Works, et al.*, Criminal No. 1267; *U.S.* v. *E. I. du Pont de Nemours & Co., et al.*, Criminal No. 1268; *U.S.* v. *E. I. du Pont de Nemours & Co., et al.*, Criminal No. 1269; *U.S.* v. *Mutual Chemical Co., et al.*, Criminal No. 1270. The defendants in all of these cases, several of whom were defendants in more than one of the proceedings, pleaded *nolo contendere* on July 16, 1945, and paid fines.

Two days before the indictments were handed up in the group of six cases listed above, the government instituted a civil action against the Solvay Process Co., a subsidiary of Allied Chemical & Dye Corp., charging it and certain others with monopolization of soda ash. *U.S.* v. *Solvay Process Co., et al.*, Complaint filed June 24, 1942, in USDC, D. of Kans., Criminal No. 2046. A consent decree, entered March 14, 1944, settled this case.

Among cases involving cartel activities of pharmaceutical, cosmetic, and soap manufacturers, see *U.S.* v. *Alba Pharmaceutical Co., et al.*, Indictment returned (Criminal No. 110-311) and Complaint filed (Civil No. 15-363), both on September 5, 1941, in USDC, SD of N.Y. On the same day defendants pleaded *nolo contendere* to the indictment and paid fines, and the court entered a consent decree in the civil action. *U.S.* v. *Bayer Co., et al.*, Petition filed September 5, 1941, in USDC, SD of N.Y., Civil No. 15-364, on which the court entered a consent decree the same day. *U.S.* v. *Schering Corp., et al.* (Criminal No. 550-C), *ibid.* (Criminal No. 552-C); *U.S.* v. *Roche-Organon, Inc., et al.* (Criminal No. 553-C); and *U.S.* v. *Schering Corp., et al.* (Civil No. 1919); Indictments returned and Complaint filed, all on December 17, 1941, in USDC, D. of N.J. On the same day, in the criminal cases, defendants pleaded *nolo contendere* and paid fines, and the court entered a consent decree in the civil action. *U.S.* v. *Halibut Liver Oil Producers*, Indictment returned February 26, 1942, in USDC, WD of Wash., Criminal No. 45, 951, and after trial the court entered a

verdict of guilty, April 8, 1944. *U.S.* v. *Merck & Co., et al.*, Complaint filed October 28, 1943, in USDC, D. of N.J., Civil No. 3159, on which the court entered a consent decree, October 6, 1945. *U.S.* v. *Procter & Gamble Co., et al.*, Information filed December 17, 1942, in USDC, D. of N.J., Criminal No. 1185-C, against three soap companies, to which defendants pleaded *nolo contendere* on the same day and paid fines.

See also "Lever Bros.," *Fortune*, November 1940, pp. 94 ff.; "Unilever in Peace and War," *Knickerbocker Weekly*, March 20, 1944, pp. 18 ff.; and "Charles Luckman," *Fortune*, July 1946, pp. 120 ff.

4. TNEC Monograph No. 10, p. 26; Plummer, pp. 32-33, 46-48, 77; Hexner, pp. 360-62; TNEC Hearings, Pt. XXV, p. 13074; and Ballande, pp. 168-71.

See also *U.S.* v. *Electrical Apparatus Export Association, et al.*, Complaint filed October 9, 1945, in USDC, SD of N.Y., Civil No. 33-275, amended March 11, 1947, charging restraint of foreign commerce in "all types of electrical equipment and apparatus for the generation, transmission and use of electricity . . ." through "cartel agreements dividing world markets . . . by exchanging information relative to bids on prospective orders and by fixing prices." On March 12, 1947 a consent decree was entered in this cause, requiring dissolution of the Export Association and enjoining the other defendants (including General Electric and Westinghouse) from continuing affiliation with the cartel, known as INCA (International Notification and Compensation Agreement). The decree also enjoined defendants, individually, from entering into any similar agreements with foreign firms or groups. See Department of Justice Press Release, Washington, March 12, 1947.

See also *U.S.* v. *General Electric Co., et al.*, Complaint filed December 9, 1942, in USDC, D. of N.J., Civil No. 2590, charging restraint of interstate and foreign commerce in fluorescent electric lamps. Trial of case postponed on May 29, 1943 for the duration of the war. On March 7, 1946 a consent decree was entered against one defendant, Corning Glass Works, enjoining further participation in such a cartel and requiring royalty-free licenses under its existing patents in the field. Case still pending against other defendants.

5. Kilgore (*Scientific and Technical Mobilization*), Pt. XVI, pp. 2105-115, 2398-413; and TNEC Monograph No. 21, pp. 106-07.

See also *U.S.* v. *Underwood Elliott Fisher Co., et al.*, Complaint filed April 20, 1940, in USDC, SD of N.Y., Civil No. 8-317, charging five manufacturers with restraint of trade in typewriters. Consent decree entered April 23, 1940. See also *International Business Machines Corp., et al.*, v. *U.S.*, 298 U.S. 131 (1936); and *U.S.* v. *American Bosch Corp., et al.*, Petition filed December 29, 1942, in USDC, SD of N.Y., Civil No. 20-164, charging cartel restrictions on fuel injection equipment for Diesel engines. Consent decree was entered in this cause on the same day. See also three complaints, all filed on July 31, 1946, in USDC, ND of Ohio, charging cartel restrictions on various types of bearings used in machinery: *U.S.* v. *Timken Roller Bearing Co., et al.*, Civil No. 24, 214; *U.S.* v. *SKF Industries, Inc., et al.*, Civil No. 24, 215; and *U.S.* v. *Norma-Hoffman Bearings Corp., et al.*, Civil No. 24, 216.

See also *U.S.* v. *National Acme Co., et al.*, Complaint filed January 7, 1947, in USDC, ND of Ohio, Civil No. 24530, charging restraint of interstate and foreign trade in machine tools through cartel agreements. Case is now pending.

6. Plummer, pp. 52-53; and Hexner, p. 370.

7. *Economic Aspects of Several International Industrial Agreements*, Economic and Financial Section, League of Nations, Geneva, 1930, pp. 57-64; J. Anton de Haas, "Economic Peace Through Private Agreement," *Harvard Business Review*, Winter 1944, p. 147; and Plummer, p. 61.

See also *U.S.* v. *Imperial Chemical Industries, Ltd., et al.*, Complaint filed January 6, 1944, in USDC, SD of N.Y., Civil No. 24-13, and Exhibit 2, Schedule A, attached

to the Complaint.

8. Plummer, 2d ed., London, 1938, p. 47; and TNEC Hearings, Pt. XXV, p. 13074.

9. *Matches,* Report No. 94, Second Series, U.S. Tariff Commission, Washington, 1935, p. 15; and Ballande, pp. 262-69.

See also *U.S.* v. *Diamond Match Co., et al.,* Complaint filed May 1, 1944, in USDC, SD of N.Y., Civil No. 25-397, charging six American and five foreign companies had restrained international trade through cartel activities. On April 9, 1946 a consent decree was entered in this cause, dissolving the cartel and requiring royalty-free licensing of certain patents held by defendants.

10. *Flat Glass,* Report No. 123, Second Series, U.S. Tariff Commission, Washington, 1937, pp. 9, 31, 64, 73, and *passim;* Plummer, pp. 7-8; Ballande, pp. 252-57; and TNEC Monograph No. 21, pp. 73-78, 131.

See also *Canada and International Cartels,* Report of the Commissioner, Combines Investigation Act, Department of Justice, Ottawa, 1945, pp. 8-10; and Department of Justice Press Release, Washington, May 23, 1947, announcing final settlement of the glass container case, involving restrictive agreements among Hartford-Empire Co., Corning Glass Works, Owens-Illinois Glass Co., Libby-Owens-Ford Glass Co., and others.

11. *Cement,* Report No. 38, Second Series, U.S. Tariff Commission, Washington, 1932, p. 13; TNEC Monograph No. 6, p. 280; TNEC Hearings, Pt. XXV, p. 13043; and Ballande, pp. 275-79.

See also *U.S.* v. *Cement Institute, et al.,* Complaint under the antitrust laws filed June 28, 1945, in USDC, D. of Colo., Civil No. 1291. Case pending. Also pending is the government's appeal from the decision of the Circuit Court of Appeals, 7th Circuit, in *Cement Institute, et al.,* v. *Federal Trade Commission,* 157 Fed. *2d* 533 (1946) setting aside the Commission's order to cease and desist from an alleged unlawful combination [*In the Matter of the Cement Institute, et al.,* 37 Fed. Trade Com. Decisions 87-262 (1943)].

12. *Asbestos,* Report No. 67, Second Series, U.S. Tariff Commission, Washington, 1933, p. 5; Hexner, p. 354; TNEC Monograph No. 21, pp. 164-65; and TNEC Monograph No. 10, pp. 193-94.

13. *Report on Agricultural Implement and Machinery Industry,* Federal Trade Commission, Washington, 1938, *passim;* and *Survey of Trade in Agricultural Machinery,* Report No. 11, Imperial Economic Committee, London, 1929, p. 22.

14. Kilgore (*Scientific and Technical Mobilization*), Pt. XVI, pp. 2087-103, 2363-97. See also *U.S.* v. *Sperry Corp., et al.,* Civil No. 19-175, Complaint under the antitrust laws, filed September 1, 1942, in USDC, SD of N.Y., charging restraint of interstate and foreign commerce in gyroscopic and other aircraft instruments; *U.S.* v. *Bendix Aviation Corp., et al.,* Civil No. 2531, Complaint under the antitrust laws, filed November 19, 1942, in USDC, D. of N.J.; and *U.S.* v. *Aqua System, Inc., et al.,* Civil No. 19-516, Petition filed under the antitrust laws, November 10, 1942, in USDC, SD of N.Y. Consent decrees were entered in all these cases: in the Sperry case on September 1, 1942, in the Bendix case on February 13, 1946, and in the Aqua case on November 10, 1942.

15. See *U.S.* v. *General Aniline & Film Corp., et al.,* Indictment returned December 19, 1941, in USDC, SD of N.Y., Criminal No. 111-136, and *U.S.* v. *Dietrich A. Schmitz, et al.,* Indictment returned on same day in same court, Criminal No. 111-137. In both these cases defendants are charged with restraining trade in photographic materials through cartel agreements. Suspended during the war, these cases were set for trial on July 28, 1947.

16. Kilgore (*Scientific and Technical Mobilization*), Pt. XVI, pp. 1981-2009, 2117-66. See also *U.S.* v. *Bausch & Lomb Optical Co., et al.,* Criminal No. 107-169, Indictment returned March 26, 1940, in USDC, SD of N.Y., and civil actions in-

volving the same parties in the same court, Complaint filed July 9, 1940, Civil No. 9-404, and Complaint filed September 16, 1940, Civil No. 10-394. Defendants pleaded *nolo contendere* to the indictment on May 27, 1940 and paid fines. On the first complaint (Civil No. 9-404) a consent decree was entered July 9, 1940. The second civil case was adjourned on June 29, 1943 for the duration of the war and is still pending.

See also *U.S.* v. *American Surgical Trade Association, et al.*, Indictment returned February 19, 1941, in USDC, ED of Pa., Criminal No. 8874, charging price fixing in surgical instrument trade. An order entered in September 1942 suspended this case for the duration of the war, and on March 18, 1946 defendants pleaded *nolo contendere* and paid fines.

## TABLE D

### AGGREGATE AGRICULTURAL PRODUCTS, UNITED STATES, 1939
*(In Millions of Dollars)*

DOMESTIC PRODUCTION

| | | |
|---|---|---|
| Total United States farm cash income | | 7,858.0 |
| Minus income from nonexportable items | | |
| Eggs | 423.0 | |
| Milk and cream | 1,182.0 | |
| Total deductions | | 1,605.0 |
| Adjusted total farm income | | 6,253.0 |
| Plus fish and furs | | 137.4 |
| Net value of adjusted "agricultural" production | | 6,390.4 |

IMPORTS AND EXPORTS

| | Imports | Exports |
|---|---|---|
| Total | 1,224.0 | 624.2 |
| Animals and animal products—edible | | |
| Live animals | 20.4 | 0.5 |
| Animal oils and fats | 0.3 | 21.2 |
| Gelatin | 0.9 | 0.2 |
| Meat extracts | 0.5 | 0.1 |
| Meat products | 27.3 | 31.7 |
| Fish | 32.4 | 13.6 |
| Other edible animal products | 0.0 | 0.5 |
| Animals and animal products—inedible | | |
| Animal oils, fats, and greases | 5.5 | 2.1 |
| Furs—undressed | 49.8 | 9.4 |
| Furs—dressed on the skin | 3.0 | 0.6 |
| Hides and skins—raw | 47.1 | 4.2 |
| Other inedible animal products | 25.6 | 2.7 |
| Vegetable products and beverages—edible | | |
| Cocoa, coffee, and tea | 188.9 | 3.4 |
| Fodders and feeds | 11.3 | 10.5 |
| Fruits and nuts | 58.2 | 83.2 |
| Grains and preparations | 11.6 | 69.5 |
| Spices | 14.4 | 0.2 |
| Sugar and related products | 134.6 | 1.7 |
| Vegetables and preparations | 18.1 | 17.2 |
| Vegetable oils and fats | 10.7 | 5.0 |

## TABLE D (*continued*)

| | | |
|---|---|---|
| Vegetable products—inedible | | |
| Drugs, herbs, leaves, roots, etc. | 11.7 | 1.6 |
| Dyeing and tanning materials | 8.3 | 1.7 |
| Nursery and greenhouse stock | 3.9 | 0.4 |
| Rubber | 181.1 | 3.0 |
| Oilseeds | 33.2 | 10.9 |
| Other seeds | 5.0 | 2.4 |
| Tobacco | 36.9 | 77.4 |
| Vegetable oils | 40.3 | 2.0 |
| Miscellaneous vegetable products | 6.1 | 2.5 |
| Textile fibers | | |
| Cotton | 8.3 | 243.0 |
| Flax, hemp, and ramie | 5.6 | 0.0 |
| Hair | 2.8 | 1.7 |
| Jute | 32.2 | 0.0 |
| Silk | 121.9 | 0.0 |
| Wool | 49.6 | 0.1 |
| Other vegetable fibers | 16.5 | 0.0 |

*Sources for data*

*Statistical Abstract of the United States,* year of issue and number of table as identified below.

*Domestic Production*

Farm cash income: *1941,* Table 664. Milk and cream: *1942,* Table 719. Fish and furs: *1941,* Table 778 (based on data from annual bulletins, Fish and Wildlife Service, Department of the Interior). To the total value of United States (except Alaskan) fishery products, the value added in preparation of canned and cured fish was added. This value and the value of product of furs dressed and dyed were obtained from: *1943,* Table 876.

*Imports: 1942,* Table 619.

*Exports: 1942,* Table 617.

# TABLE E

## AGGREGATE MINERALS, UNITED STATES, 1939
*(In Millions of Dollars)*

| Product | | Domestic Production | Imports | Exports |
|---|---|---|---|---|
| **Fuels** | | | | |
| Coal—anthracite | | 187.2 | 1.9 | 19.9 |
| Coal—bituminous | | 728.2 | 1.2 | 42.8 |
| Petroleum | | 1,294.5 | 23.3 | 92.8 |
| **Metals** | | | | |
| Bauxite [a] | | 2.2 | 6.9 | 1.1 |
| Copper | | 148.2 | 44.1 | 85.6 |
| Lead | | 39.6 | 7.2 | 4.5 |
| Magnesium [b] | | 4.0 | 0.0 | 0.8 |
| Mercury | | 1.9 | 0.3 | 0.1 |
| Nickel | | 0.0 | 29.1 | 5.1 |
| Tin | | 0.0 | 71.0 | 0.0 |
| Zinc | | 51.1 | 3.5 | 1.9 |
| Pig iron | | 626.8 | 1.0 | 59.3 |
| Manganese | | 2.9 | 11.6 | 0.2 |
| Molybdenum | | 22.2 | 0.0 | 14.1 |
| Tungsten | | 4.4 | 1.5 | 0.9 |
| Other metals and ferroalloys [c] | | 81.2 | 13.4 | 6.8 |
| Precious metals [d] | | 242.2 | 101.4 | 16.1 |
| Subtotal, metals and fuels | | 3,436.6 | 317.4 | 352.0 |
| **Nonmetallic minerals** | | | | |
| Production, total nonmetallic minerals (except fuels) | | 788.9 | | |
| Minus transfers (to manufactures) | | | | |
| Cement | 184.3 | | | |
| Lime | 30.0 | | | |
| Mineral paints | 19.0 | | | |
| Salt | 24.5 | | | |
| Minus omissions | | | | |
| Sand and gravel | 107.6 | | | |
| Stone and slate | 165.1 | | | |
| Total deductions | | 530.5 | | |
| Net aggregate domestic production of nonmetallic minerals | | 258.4 | | |
| Imports and exports, "Nonmetallic Minerals" (trade statistics "Group 5"), less fuels | | | 95.0 | 54.4 |
| Plus transfers (from trade statistics "Group 8—Chemicals") | | | | |
| Iodine—crude | | | 0.2 | 0.0 |
| Phosphates | | | 0.4 | 6.4 |
| Potassic fertilizer materials | | | 5.8 | 4.4 |
| Sodium salts | | | 11.2 | 0.0 |
| Total | | | 112.6 | 65.2 |

TABLE E (*continued*)

| | | | | | |
|---|---|---|---|---|---|
| Minus transfers (from trade statistics "Group 5" to manufactures) | | | | | |
| Abrasives (fabricated) | | 0.3 | | 2.4 | |
| Asbestos manufactures | | 0.1 | | 2.8 | |
| Asphalt manufactures | | 0.0 | | 0.9 | |
| Carbon products | | 0.2 | | 3.2 | |
| Clay products (including pottery) | | 13.4 | | 8.1 | |
| Cement | | 1.9 | | 2.4 | |
| Glass | | 5.2 | | 10.4 | |
| Insulating materials (fabricated) | | 0.0 | | 0.2 | |
| Lime | | 0.1 | | 0.2 | |
| Salt | | 0.1 | | 0.6 | |
| Minus omissions | | | | | |
| Brick | | 0.1 | | 0.3 | |
| Stone | | 0.7 | | 0.4 | |
| Total deductions | | | 22.1 | | 31.9 |
| Net aggregate imports and exports of nonmetallic minerals | | | 90.5 | | 33.3 |
| GRAND TOTALS (all minerals) | 3,695.0 | | 407.9 | | 385.3 |

*Sources: Statistical Abstract of the United States,* year of issue and number of table as specified. Production: *1941,* Table 796 (based on data from *Minerals Yearbook,* Bureau of Mines). Imports: *1942,* Table 619. Exports: *1942,* Table 618.

a. Imports include scrap metal, exports do not, because in customs data it is lumped with virgin ingot.

b. Exports of ingot metal estimated.

c. Includes antimony, cadmium, chromite, cobalt, selenium, tellurium, titanium, uranium, and vanadium.

d. Data in the source exclude gold and silver in ore, bullion, and coin. For the exports and imports, silver was added (from: *1942,* Table 586). Exports and imports of gold were omitted because these are generally not classified as "merchandise." Moreover, they do not represent newly mined gold but gold hoardings. However, gold mined in the United States in 1939 is included in the value of domestic production of precious metals for that year. Although gold is purchased by the Treasury and most of it does not serve as "merchandise," newly mined gold does constitute a portion of national output and income.

# TABLE F

## AGGREGATE MANUFACTURES, UNITED STATES, 1939

*(In Millions of Dollars)*

DOMESTIC PRODUCTION

| | | Value of Product |
|---|---|---|
| Total domestic production | | 56,843.0 |
| Minus domestic manufactures transferred to agricultural products or minerals | | |
| Blast furnace products | 550.8 | |
| Canned and cured fish and fish oils | 94.7 | |
| Cooking and other oils | 186.3 | |
| Dyeing and tanning materials | 42.2 | |
| Expressed oils and fats | 283.4 | |
| Furs—dressed and dyed | 22.4 | |
| Grease and tallow | 58.2 | |
| Meat packing | 2,649.4 | |
| Oleomargarine | 34.1 | |
| Sugar refining | 557.8 | |
| Other animal and vegetable oils | 30.5 | |
| | | 4,509.8 |
| | | 52,333.2 |
| Minus domestic manufactures nonexportable | | |
| Bread | 1,211.0 | |
| Brick, terra cotta, roofing, and clay floor and wall tiles | 100.9 | |
| Candy | 297.8 | |
| Concrete products | 130.4 | |
| Dyeing and finishing | 271.2 | |
| Electroplating | 28.2 | |
| Ice cream and ices | 285.8 | |
| Ice manufactures | 130.2 | |
| Malt and malt liquors | 584.6 | |
| Millinery | 105.6 | |
| Printing, publishing, and allied industries | 2,578.5 | |
| Tombstones and monuments | 75.8 | |
| | | 5,799.9 |
| Aggregate domestic manufactured products | | 46,533.3 |

IMPORTS AND EXPORTS

| | Imports [a] | Exports [a] |
|---|---|---|
| Total | 819.1 | 2,197.4 |
| Dairy products (except milk and cream) | 13.3 | 2.6 |
| Leather | 9.6 | 13.0 |
| Leather manufactures | 6.5 | 10.3 |
| Fur manufactures | 2.7 | 1.3 |
| Wheat flour, biscuits, etc. | 0.6 | 30.0 |
| Gums, resins, and balsams | 14.3 | 15.1 |
| Beverages | 59.5 | 3.9 |
| Sugar products | 0.0 | 3.1 |
| Rubber manufactures | 1.3 | 36.5 |
| Essential and distilled oils | 6.4 | 3.1 |
| Tobacco manufactures | 3.6 | 14.9 |
| Miscellaneous vegetable products | 0.0 | 4.7 |

TABLE F (*continued*)

| | | |
|---|---|---|
| Cotton (fabricated products) | 39.7 | 68.3 |
| Jute manufactures | 4.1 | 2.4 |
| Flax, hemp, and ramie manufactures | 22.4 | 0.5 |
| Binding, twine, cordage | 4.4 | 1.0 |
| Wool semimanufactures and manufactures | 25.6 | 3.7 |
| Silk manufactures | 7.7 | 7.7 |
| Rayon and other synthetic textiles | 11.3 | 15.3 |
| Miscellaneous textile products | 10.5 | 13.8 |
| Lumber | 8.3 | 3.3 |
| Wood products | 32.4 | 55.6 |
| Cork and manufactures | 4.4 | 1.1 |
| Paper (paper base stocks and manufactures) | 215.2 | 38.7 |
| Manufactured products of petroleum and coal | 21.7 | 296.2 |
| Cement | 1.9 | 2.4 |
| Salt | 0.1 | 0.6 |
| Glass and glass products | 5.2 | 10.4 |
| Lime | 0.1 | 0.2 |
| Pottery | 6.7 | 2.7 |
| Other clay products | 0.0 | 4.7 |
| Other nonmetallic mineral products | 0.4 | 10.2 |
| Steel bars and steel mill products | 13.0 | 176.3 |
| Iron and steel (advanced manufactures) | 2.5 | 49.8 |
| Aluminum products | 1.5 | 23.7[b] |
| Copper products | 1.8 | 97.1 |
| Brass and bronze | 0.5 | 8.9 |
| Lead | 4.8 | 5.6 |
| Nickel | 25.3 | 5.1 |
| Zinc | 1.9 | 2.3 |
| Tin | 69.8 | 1.1 |
| Nickel silver | 0.0 | 0.1 |
| Babbitt metal | 0.0 | 0.4 |
| Nickel chrome wire | 0.0 | 0.6 |
| Mercury | 0.0 | 0.1 |
| Antimony | 0.2 | 0.0 |
| Cobalt | 2.7 | 0.0 |
| Other metals and manufactures of metals | 2.2 | 4.6 |
| Precious metals and jewelry | 2.1 | 0.8 |
| Chemicals[c] | 75.6 | 153.4 |
| Machinery and vehicles | 15.1 | 896.0 |
| Miscellaneous (minus household and personal effects and American merchandise returned) | 60.3 | 94.2 |

*Sources: Statistical Abstract of the United States,* year of issue and number of table as specified. Production: *1943,* Table 876 (based on data from Census of Manufactures). Exports: *1942,* Table 618 (based on data from Bureau of Foreign and Domestic Commerce). Imports: *1942,* Table 619 (based on data from Bureau of Foreign and Domestic Commerce).

a. Includes all manufactured items except those especially classified as minerals or agricultural and those considered nonexportable for more than over-the-border trade. For a list of these items, see domestic production.

b. Includes an indeterminate amount of scrap metal.

c. Includes entire trade statistics category entitled "Chemicals and Related Products" except natural fertilizer materials and crude iodine (which are classified as minerals), and salt (which is listed separately). The trade statistics category is also altered by inclusion of gums and resins, drugs and herbs.

# TABLE G

## Comparison of Aggregate and Cartelized Business in Agricultural, Mineral, and Manufactured Products in the United States, 1939

*(In Millions of Dollars)*

| | Agricultural | Mineral | Manufactures |
|---|---|---|---|
| Aggregate | | | |
| Domestic production | 6,390.4 | 3,695.0 | 46,533.3 |
| Plus imports | 1,224.0 | 407.9 | 819.1 |
| Total supply | 7,614.4 | 4,102.9 | 47,352.4 |
| Minus exports | 624.2 | 385.3 | 2,197.4 |
| Net domestic sales | 6,990.2 | 3,717.6 | 45,155.0 |
| Cartelized | | | |
| Domestic production | 2,537.6 | 3,291.3 | 20,255.5 |
| Plus imports | 784.9 | 302.0 | 475.6 |
| Total supply | 3,322.5 | 3,593.3 | 20,731.1 |
| Minus exports | 129.4 | 361.6 | 1,435.9 |
| Net domestic sales | 3,193.1 | 3,231.7 | 19,295.2 |
| Proportion of cartelized to aggregate | 45.68% | 86.93% | 42.73% |

*Sources:* Data from Appendix Tables A-F. Table 1 in Chapter 3 presents the same data in different form.

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